POLICY RESEARCH WORKING PAPER 2038

Good Governance and Trade Policy

Are They the Keys to Africa's Global Integration and Growth?

Turning the economies of Sub-Saharan Africa around requires badly needed national policy reform — abandoning the region's restrictive fiscal, monetary, property, and wage policies and trade barriers.

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Summary findings

Economists often argue that the level and structure of a country's trade barriers and the quality of its governance policies (for example, regulating foreign investment or limiting commercial activity with red tape) have a major influence on its economic growth and performance.

One problem testing those relations empirically was the unavailability of objective cross-country indices of the quality of governance and statistics on developing countries' trade barriers.

Ng and Yeats use new sources of empirical information to test the influence of trade and governance policies on economic performance. They use a model similar to those used in the literature on causes and implications of economic growth but focus more heavily on the World Bank's index of the speed with which countries are integrating into the world economy.

Their results show that countries that adopted less restrictive governance and trade policies achieved significantly higher levels of per capita GDP; experienced higher growth rates for exports, imports, and GDP; and were more successful integrating with the world economy.

Regression results indicate that national trade and governance regulations explain over 60 percent of the variance in some measures of economic performance, implying that a country's own national policies shape its rate of development, industrialization, and growth.

Their tests provide new insights into the phenomenon of economic "convergence," showing that poorer open countries are integrating more rapidly into the global economy than others. This finding parallels what others have observed about economic growth rates.

They test their empirical results in a case study asking whether inappropriate national policies have caused Sub-Saharan Africa's dismal economic performance. The evidence strongly supports this proposition.

Indices of the quality of national governance show that African countries have generally adopted the most inappropriate (restrictive) fiscal, monetary, property, and wage policies and that their own trade barriers (including customs procedures constraining commercial activity) are among the world's highest.

Improving African trade and governance policies to levels currently prevailing in such (non-exceptional) countries as Jordan, Panama, and Sri Lanka would be consistent with a sevenfold increase in per capita GDP (to about $3,500) and an annual increase of 3 or 4 percentage points in the growth rate for this variable.

This paper — a product of Trade, Development Research Group — is part of a larger effort in the group to accelerate the trade and growth of developing countries. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Lili Tabada, room MC3-333, telephone 202-473-6896, fax 202-522-1159, Internet address ltabada@worldbank.org. The authors may be contacted at fng@worldbank.org or ayeats@worldbank.org. January 1999. (70 pages)

GOOD GOVERNANCE AND TRADE POLICY

Are They the Keys to Africa's Global Integration and Growth?

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Summary

Economists generally argue that the level and structure of a country's own trade barriers, as well as the "quality" of its governance policies, such as regulations on foreign investment or bureaucratic "red tape" on commercial activity, will have a major influence on its economic growth and performance. However, a problem previously encountered in attempts to test these relations empirically was that no objective cross-country indices of the quality of governance were available, nor were general statistics on developing countries' trade barriers. Several new sources of empirical information help fill these information gaps and can be used to test the influence of trade and governance policies on economic performance. This study conducts these tests utilizing a model similar to those employed in the literature on the causes and implications of economic growth. However, our analysis differs somewhat in that we focus more heavily on an alternative measure of economic performance - the World Bank's index of the speed with which countries are integrating into the global economy.

Our results show countries which adopted less commercially restrictive governance and trade policies generally achieved significantly higher levels of GDP per capita, they experienced higher growth rates for exports, imports and GDP, and were more successful in integrating into the global economy. Regression results indicate national trade and governance regulations explain over 60 percent of the variance in some measures of economic performance - which implies that a country's own national policies are a major determinant of its rate of development, industrialization and growth. Our tests also provide new insights concerning the phenomenon of economic "convergence" in that they show poorer open countries are integrating more rapidly into the global economy than others. This finding parallels what others have observed in economic growth rates.

This study tests its empirical results in a "case study" involving Sub-Saharan Africa, and asks whether inappropriate national policies caused the region's dismal economic performance? The evidence strongly supports this proposition. Indices of the quality of national governance show African countries have generally adopted the most inappropriate (restrictive) fiscal, monetary, property and wage policies, and their own trade barriers (including customs procedures that are a major constraint to commercial activity) are among the highest of any other regional group.

Regression tests indicate that an "improvement" of African trade and governance policies to levels that currently prevail in such (non-exceptional) countries like Panama, Jordan, or Sri Lanka would be consistent with a seven-fold increase in GDP per capita (to about $3,500) and an annual increase of about 3 to 4 percentage points in the growth rate for this variable. Since African exports generally face zero or very low tariffs, and relatively few nontariff barriers in major OECD markets, the implications of these findings are that the region's most pressing economic and trade problems will primarily have to be resolved by Africa itself through the implementation of badly needed government policy reforms. In the 1997 World Development Report the World Bank provided a graphic description of the magnitude of these problems:

"Achieving a turnaround in the effectiveness of the state [in Sub-Saharan Africa] will not be easy since the roots of state failure are many and complex. Chief among them has been a continuing struggle between traditional forms of governance and social organization (often based on tribes, lineages, and language and kinship groups) and modern forms of government. High military expenditure and dysfunctional behavior of military personnel (in the absence of other checks and balances) have been important impediments. These have often reduced the transparency and accountability of public institutions to the extent that governments have felt a decreasing need to explain and justify their actions to the domestic population."

Implementing the needed improvements in governance will require major commitments, resolve and dedication that many African leaders typically have not exhibited in the past. However, for past and present problems to be effectively addressed such changes are clearly of fundamental importance.

GOOD GOVERNANCE AND TRADE POLICY

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Francis Ng and Alexander Yeats*

I. INTRODUCTION

The role and contribution of international trade to the process of industrialization and growth has long been a topic of interest to economists, and a large number of studies examined this relationship empirically. Most of these investigations confirmed Kravis (1970) conclusion that international trade provides an important stimulus to growth.[1] As a result, attention shifted to the identification of factors that constrained a country's capacity to fully engage in international trade and experience its beneficial economic effects.[2] While high foreign tariffs

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[1]Kravis' often cited work concluded that trade was an "engine of growth" in the 19th century. Although he still found a strong positive relation between the two he concluded it was a "handmaiden of growth" in the 20th century. See Singer (1950), Myrdal (1957), Harberler (1959), Prebish (1959), or Chenery (1961) among others for illustrative examples of the general theoretical and conceptual debate on the relationship between trade and growth. Representative studies which attempted to test this relationship empirically include Maizels (1968), Michaely (1977), Balassa (1978), Bhagwati (1978), Reidel (1984), Singer and Grey (1988) or Ng and Yeats (1997) among others.

[2]Keesing (1967) provides a useful discussion of the reason why trade has these positive industrialization and development effects. Trade brings individuals in developing countries into contact with new technologies, products and skills and these learning effects produce an outward shift of the production-possibility frontier. International trade also offers a means whereby some countries can circumvent the natural limitations of their own small domestic markets. Production for export can increase employment opportunities directly and may also have similar effects in industries with forward or backward linkages to the export sector. Increased competition from foreign firms can also weaken the monopoly position of some domestic enterprises and result in lower prices and better service for consumers. Trade can also produce important long-term benefits if foreign competition forces local producers to modernize and keep abreast of recent developments and technologies.

and nontariff restrictions can reduce trade below potential levels, it was recognized that domestically imposed restrictions can have similar adverse effects in less evident ways. Specifically, a growing number of empirical investigations showed a country's own trade policies may create a significant bias against exportables, cause a mis-allocation of resources among industries producing for the domestic market, and also reduce a country's capacity to respond to unfavorable external shocks.[3] These twin conclusions; (i) that trade has an important positive impact on industrialization and growth; and (ii) high domestic trade barriers reduce a country's capacity to benefit from potential learning experiences, keep abreast with modern technologies, realize higher foreign exchange earnings, or benefit from more vigorous competition are at the core of policy prescriptions that seek a liberalization of a country's own trade restrictions to improve overall economic performance.

The physical characteristics of a country, and its own governmental policies that influence the general business "environment," can also have a major impact on a nation's ability to achieve its economic potential. Domestic tax and profit retention policies, those relating to the provision of social services, measures bearing on political stability or the ease with which businesses are established and operate, policies relating to the quality and availability of transport, financial, communications or educational services certainly will have a key influence on a country's ability

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[3]Balassa and Associates (1971), UN Economic Commission for Asia and the Far East (1972), and Grubel and Johnson (1971) show how the level and structure of a country's own trade barriers may incorporate an important anti-export bias. Balassa (1982)(1983) determined that countries which pursued "outward oriented" trade policies, characterized by low import barriers were better able to respond to adverse external shocks than those with high tariffs and restrictive NTBs. The negative growth and industrialization record of countries that adopted "import substitution" development strategies provides further evidence as to the superiority of open trade policies.

to attract investment needed to foster industrialization and integration into the global economy.[4] In short, four general factors can influence a country's trade and growth: (i) the level and structure of trade restrictions encountered in major export markets; (ii) domestic trade policies implemented by the country itself; (iii) local government policies affecting the general business climate and the ability of local entrepreneurs to exploit opportunities in foreign and domestic markets; and (iv) physical characteristics of a country like its size, resource endowments, location, and climate. Much of the recent literature on the causes and implications of economic growth (as reflected in studies by Sachs and Warner (1995)(1998) or Barro and Sala-i-Martin (1991)(1992)) attempt to identify factors promoting economic performance and empirically assess their relative importance.

Although considerable evidence has accumulated concerning the sources and implications of economic growth (such as the presumed tendency of open economies to "converge" at similar levels of income), some potentially useful cross-country analyses were constrained by the fact that many policy variables relating to governance had not been systematically quantified. Even information on most developing countries' tariffs and nontariff barriers were not available in a common format, or for common points in time (this was not the case for OECD countries' trade barriers), and this greatly limited possibilities for empirical analyses of the relationship between

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[4]The importance of good governance as a catalyst to industrialization and growth in developing countries is put graphically by the World Bank (1997): "The clamor for greater government effectiveness has reached crisis proportions in many developing countries where the state has failed to deliver even such fundamental public goods as property rights, roads, and basic health and education. There a vicious circle has taken hold: people and business respond to deteriorating public services by avoiding taxation, which leads to further deterioration in services. In the former Soviet Union and Central and Eastern Europe it was the state's long-term failure to deliver on its promises that led, finally, to its overthrow. But the collapse of central planning has created problems of its own. In the resulting vacuum, citizens are sometimes deprived of basic public goods such as law and order. At the limit, as in Afghanistan, Liberia, and Somalia, the state has sometimes crumbled entirely, leaving individuals and international agencies trying desperately to pick up the pieces.

foreign and domestic trade barriers, the quality of governance, and growth.[5] However, trade barriers in developing countries, as well as empirical measures of the quality of governance, have recently improved dramatically and the possibilities for cross-country analyses of their effects considerably increased.

This study's objective is to employ these new data sources in an examination of the relationship between the level of both foreign and domestic trade barriers, and factors pertaining to quality of governance and the business environment on economic performance. The paper proceeds as follows. First, the sources and properties of the new empirical information are discussed and these statistics are then used to construct a database on trade and governance policies in 80 developing countries. This section of the report also discusses the use of several economic "performance" variables that can provide a measure of a country's industrialization and growth. Next, correlation tests are employed to determine the extent to which the trade, governmental policies, and economic performance variables are related and how strong is the association. Third, a multiple regression model, which is patterned on previous analyses by Sachs and Warner (1995)(1988), is then employed to assess the combined influence of the trade and governance policies on economic performance. We do, however, take a somewhat different orientation than most previous "growth" studies in that we focus more heavily on the speed with

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[5]To provide the required information for multilateral trade negotiations such as the Uruguay Round, international agencies (primarily UNCTAD and the GATT) devoted considerable time and resources to the compilation of statistics on trade restrictions in OECD markets. This information played a key role in insuring the success of the multilateral trade negotiations (MTNs) since it provided negotiators with the required information on the restrictions they were attempting to reduce. However, since most developing countries did not actively participate in past negotiations there was much less of an incentive to compile information on their trade barriers. In previous MTNs developing countries generally clung to the principle of nonreciprocity arguing that, due to the nature of their internal development problems, it was not feasible to offer reciprocal tariff reductions in return for those of developed countries. Since the developing countries were in fact trying to negotiate tariff cuts in their export markets, without offering concessions in return, their bargaining power was, at best, very weak.

which individual countries are integrating into the global economy as a primary measure of economic performance. Fourth, the study then applies the empirical findings in a "case study" involving Sub-Saharan Africa to determine the extent to which inappropriate domestic policies contributed to the region's generally dismal economic performance. The study closes with an overall assessment of the results and their implications for the formulation of trade and growth policies.

II. DATA SOURCES AND METHODOLOGY

This study draws on three independently compiled databases developed by national and international organizations. Statistics on foreign and domestic trade barriers were taken from published UNCTAD reports (and to a lesser extent those of the World Trade Organization), while empirical indices of the quality of national governance were drawn from a recent publication by the Heritage Foundation and the Wall Street Journal. The empirical measures of economic performance, such as the speed of integration into the global economy, or growth in GDP, or exports, were drawn from World Bank publications.

A. Statistics on Developing Countries' Trade Barriers

Over the past two decades the United Nations Conference on Trade and Development (UNCTAD) took the lead in compiling statistics on developed countries' trade barriers with the objective of producing an "inventory" of matched trade, tariff and nontariff barrier statistics (Laird and Yeats 1990 describe the methodology used in preparing this information and potential applications use in research and policy studies). UNCTAD (1994a)(1994b) subsequently updated

and extended its earlier inventory to cover about 100 developed and developing countries.

Although less extensive in its national coverage, the GATT (now World Trade Organization) also collected and published empirical information on trade and trade barriers in individual countries chosen for this organization's trade policy review (TPR) process. The country specific TPR reports normally provide extensive tabular information on tariffs and nontariff restrictions applied by the country under investigation (see GATT 1990, 1992 or 1995 for representative examples of the statistics generated). Unlike the UNCTAD statistics, which are often available at the level of the tariff line, the WTO data generally are for more aggregate product groups.

This study utilizes these statistical sources for data on trade barriers in developing countries. In drawing on this information a specific sequence of use was employed. First, we relied on the UNCTAD (1994a)(1994b) reports given their common statistical format for trade barrier information across countries. The 50 developing countries included in these publications were all selected for our analysis. Next, additional countries that were the focus of a World Trade Organization TPR investigation, but were not included in the UNCTAD reports, were added with some related data taken from an OECD (1996) publication. The WTO sources provided data for an additional 20 countries. Finally, trade and trade barrier statistics for a few additional countries were drawn from an earlier UNCTAD (1987) document. Since many developing countries initiated major trade policy reforms in the late 1980s and 1990s, only limited use was made of this report and countries where major reforms occurred were excluded. Altogether, these published sources provided information on the trade regimes of 80 developing countries. The annex and appendix tables to this study provides information as to how this

information was used to compute country specific information on trade and nontariff barriers, and also gives detailed statistics on these national trade barriers and the profiles of protection in the developing countries.

B. Statistics on Foreign Trade Barriers

Our analysis recognizes that trade barriers in major foreign export markets can also have an important influence on developing countries' trade, industrialization and growth prospects. If foreign tariffs and nontariff barriers facing a country's exports are high it may only have a limited capacity to offset these external constraints - (say) through the adoption of enlightened domestic policies that create a favorable business climate. Conversely, economic performance in a second country, whose exports do not encounter major trade barriers, may be greatly stimulated by the adoption of appropriate domestic trade and governance measures. In recognition of this point, two additional variables were tested in our analysis. The first is the average pre-Uruguay Round tariff rate that each country faced in OECD markets. The second was a tabulation of the share of its exports that encountered one or more forms of OECD nontariff restrictions.[6] As was the case with the domestic trade interventions (see Section A above), the UNCTAD and World Trade Organization sources were used for the compilation of this additional information.

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[6]While it may have been more desirable to compile this data for all export markets, there were too many "holes" in the available information for this approach to be employed. That is, trade barrier data was not available for some Latin American, Asian and African countries, or for the states of the former Soviet Union so a decision was made to tabulate the statistics for OECD markets where complete data were available. It should be noted that the OECD countries are the most important markets for most developing countries and receive approximately 60 percent of the latter's exports. See Pritchett (1996) for a useful discussion of the problem of measures of "openness" in individual countries.

C. Statistics on the Quality of Governance

Although the approach is relatively new, several recent publications attempted to quantitatively "measure" the overall "quality" of governance in individual countries as well as other factors that influence economic performance and the environment for growth. For example, Transparency International recently constructed numeric indices of the extent of corruption in 54 developed and developing countries by using detailed interviews with government officials and local and foreign businessmen. The indices ranged, theoretically, from a value of zero for a country perceived to be totally corrupt to a value of 10 for a country perceived to be totally clean.

More recently, the Wall Street Journal and the Heritage Foundation (WSJ-Heritage 1997) compiled and published indices of the overall economic policy environment in 150 individual countries along with similar statistics (indices) on government policies relating to ten key underlying factors, namely, the extent and severity of trade controls, the overall level of taxation and its impact of economic incentives, the extent and severity of government interventions in the economy, the appropriateness of national monetary policy and its contribution to inflation, the extent to which restrictions were placed on capital flows and their impact on foreign investment, the restrictiveness of government controls on banking, the extent of government imposed wage and price controls, the security of property rights and the degree to which they were protected by the government, the extent of government regulation of industry, and the size of the black

market.[7] The WSJ-Heritage index for each of these variables, *which were all assigned on the basis of highly objective underlying criteria,* could take a value ranging from one to five with lower values indicating a policy environment more conducive to economic growth. Index values were assigned on the basis of clearly specified empirical standards that greatly limited the potentially corruptive influence of subjective judgements.[8] In addition, an overall index of the quality of the national economic environment was derived by averaging the ten WSJ-Heritage policy indices.

D. Empirical Measures of Economic Integration and Performance

While WSJ-Heritage constructed indices for policy variables that should influence industrialization and growth, a related consideration concerns the selection of empirical measures of economic performance? Since gross domestic product (GDP) reflects the value of all nationally produced goods and services, both the level and rate of change in GDP (expressed on a per capita basis) are clearly two relevant measures of performance. Cross-country comparisons of the value of GDP per capita can indicate whether nations that pursued

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[7]For example, in the construction of the taxation index five gradations of income tax levels were set - ranging from no taxes on income or a flat tax rate of 10 percent or less - a situation assigned a value of 1.0 - as opposed to an environment where a top rate of over 50 percent was applied along with a tax on average income between 20 and 25 percent. This "worst case" environment was assigned an index of 5. Similar gradations were made for corporate tax rates and index values assigned. The corporate and income tax indices were then average to arrive at an overall "tax environment" index for the country. For details as to how the indices were constructed and information on specific factors surveyed within each of the other government policy sectors see The Wall Street Journal and Heritage Foundation (1997).

[8]As an illustration, a trade policy index of 1 was assigned to a country with average tariffs of 4 percent or less, while an index of 2 was assigned to countries whose tariffs were in the 5 to 9 percent range. The worse rating (an index of 5) was assigned to countries with average tariffs exceeding 20 percent. WSJ-Heritage also examined various published studies (IMF, WTO, UNCTAD) to determine the extent that nontariff protection was used to supplement that from tariffs. Where NTBs were extensively applied the (tariff derived) index was increased by one point.

enlightened trade and governance policies generally achieved higher output levels. Similarly, analysis of the rate of change in per capita GDP can show whether countries that adopted such policies are growing at above average rates. The reader should note that here, and in the discussion that follows, we focus on two different types of performance measures: (i) those that relate to current levels, and those that relate to recent changes in an economic variable. Differences in the former should reflect differences in previous "achievement" although one must be careful about lines of causation (that is, richer countries may find it easier to implement lower trade barriers once they pass a certain threshold). For this reason we tend to assign more importance to tests involving the "rate of change" performance measures. Another potentially useful measure of economic performance can be drawn from the World Bank's (1996) attempt to derive an index of the success of individual countries in integrating their trade, financial and other economic ties with the global economy.[9] Measures of integration are of interest since this process should be seen as an intermediate goal that will later influence performance (World Bank 1996, pp. 25-31). The Bank's measure incorporated the rate of change in four underlying factors, namely: (i) changes in real trade as a share of GDP, (ii) changes in the country's institutional investor ratings, (iii) foreign direct investment (FDI) as a share of GDP, and (iv) the share of manufactures in total exports.[10] The speed of integration index is an average of the scores for these four variables after they were standardized to have a mean of 0 and a

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[9]The World Bank (1997, p. 2) provides a graphic statement as to the importance of good governance in enabling assisting countries to integrate into the global economy. "The global integration of economies and the spread of democracy have narrowed the scope for arbitrary and capricious (government) behavior. Taxes, investment rules, and economic policies must be ever more responsive to the parameters of a globalized world economy. Technological change has opened new opportunities for unbundling services and allowing a larger role for markets. These changes have meant new and different roles for government - no longer as a sole provider but as a facilitator and regulator."

[10]See World Bank (1996) particularly Appendix 2 for details of this empirical analysis.

standard deviation of 1. The index would normally range between values of $\pm$ 3.0 with higher positive index values identifying countries that were more successful in integrating globally. Negative values indicate the links were deteriorating or developing at a below average rate.

Several additional performance measures, which are based on both the rate of growth and level of trade, were also tested. For example, the rate of change in the value or volume of exports can indicate how well a country capitalized on commercial opportunities in foreign markets.[11] Were countries that adopted appropriate trade and governance policies relatively more successful in exploiting export opportunities? Analyses of similar measures for imports should show the extent to which a country was able to draw upon foreign suppliers whose products might be of superior quality to those available locally. Countries should have an incentive to reduce barriers which constrain their nationals' ability to secure superior foreign goods given the positive associated welfare and production effects of such access. Finally, a trade "openness" measure (that is, the ratio of imports plus exports to GDP) also has relevance for our empirical tests. Since more open countries have demonstrated an ability to better adjust to adverse exogenous shocks, and are better able to capitalize of foreign trade opportunities (Balassa 1982, 1983), increases in this measure could be interpreted as a gauge of improved performance.

Before turning to the empirical analysis some additional points should be noted. First, nonpolicy factors like country size or geographic location may also influence economic

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[11]Government sponsored incentives like export subsidies can undermine the reliability of this variable as a measure of economic performance. For example, in the 1970s and 1980s the European Economic Community paid massive export subsidies to sugar exporters with the result that the EEC grew from a relatively minor factor in international markets to the world's largest sugar exporter, thereby displacing many traditional suppliers in the Caribbean. Some developing country governments have also paid export subsidies for manufactured goods and these have occasionally been subject to OECD countervailing duties.

performance. Several published studies suggested smaller countries may face more formidable obstacles to growth and industrialization due to constraints stemming from limited domestic market size, or due to a more limited natural resource base (see Khalif 1974 among others). For this reason, two measures of market size, namely, population and the value of gross domestic product were also employed in our initial statistical analysis since these factors may influence both the "level" and "growth" performance measures. In addition, we also recognize that global demand and market conditions for the types of goods a nation produces can have an impact on the trade and performance variables. The problems and benefits of trade for countries whose exports are concentrated in energy products or primary commodities may be quite different than those facing a country whose exports consisted largely of manufactured goods. This contention was behind UNCTAD's efforts to establish a "Common Fund" for stabilizing commodity prices (UNCTAD 1972, 1977). For this reason, two dummy variables were employed in the analysis. The first took a value of unity for countries where three-quarters or more of all exports were primary commodities, while the second identified countries where energy products consisted of three-quarters or more of total exports.[12] The rationale for identifying the latter group separately is that they may have considerably greater access to the financial resources needed for industrialization than most other developing countries - or tend to have overvalued exchange rates.

Clearly there are additional factors like climate, direct access to ocean transport, distance to major international commercial centers, or the extent of natural resource endowments that

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[12]Primary commodities were defined as all items falling in SITC groups 0, 1, 2, 3, 4 and 68. Energy products included all items classified in SITC group 3. Binary variables were selected for these terms since they appear to have exhibited a superior performance in many empirical studies of the relation between commodity concentration of exports and export earnings instability.

may also influence a country's industrialization and growth. We recognize the potential importance of these factors, but have structured our approach to focus solely on the influence of national trade and governance policies.

III. ECONOMIC PERFORMANCE, TRADE POLICIES AND GOVERNANCE

While the preceding discussion argued that a country's economic performance was dependent on its trade and governance policies, and the environment for growth they create, key questions concern the strength of these relationships and whether there are significant differences in the relative importance of types of policies (say, tax as opposed to monetary policy). If such differences exist their identification could help establish priorities for policy change. Since the relevant variables have all been quantified, correlation and regression tests could indicate their individual and combined importance.

A. The Influence of Trade Policy Variables

Table 1 presents results when the eight economic performance measures were correlated with four measures of the developing countries' own trade restrictions (average tariffs, average tariffs plus para-tariff charges, an NTB frequency of use index, and the WSJ-Heritage trade policy index), as well as measures of the level of foreign tariffs and nontariff barriers these countries face. In addition, correlations between the economic performance variables and: (i) the overall WSJ-Heritage governance index; the proxies for country size; and (iii) the dummies reflecting the composition of exports are also shown. Several important points emerge from these statistical tests.

· Strong significant results occur when the WSJ-Heritage trade policy and overall governance index are correlated with the economic performance variables. In fact, the correlations between the trade policy index and GDP per capita (a performance measure reflecting the level of development that has been achieved), as well as the speed of integration index (r = - 0.457 and -0.446, respectively) which is a measure of change, are among the strongest shown in the table and take the expected directional sign. The sole exception is the correlation between the WSJ-Heritage trade policy index and export volume growth rate which fails to achieve statistical significance at the 95 percent confidence level.[13]

· Surprisingly, countries whose exports encounter relatively high foreign tariffs also achieved higher rates of growth for both GDP and exports (r = -0.436 and -0.477 respectively). Higher external tariff and nontariff barriers are also significantly correlated with many of the other performance variables. There appear to be at least two likely explanations. First, the line of causation which generally occurs is that protectionism is implemented in sectors where trade is growing at an above average pace or even surging. Second, many of the high trade and economic growth rate countries, like Korea, Taiwan (China), or Singapore, were more than able to overcome the relatively high external OECD trade barriers through the adoption of appropriate domestic governance and trade policies. As an example, the WSJ-Heritage indices indicate Hong Kong and Singapore pursued the most enlightened governance policies of all the developed and developing countries and also had the highest values for most of the performance variables. No doubt, Hong Kong and Singapore's export and GDP growth would have been even greater had not their goods encountered relatively high external barriers, but the correlation results show they were more than overcome by the adoption of appropriate domestic policies. There is an important message here for other developing countries who assign excessive importance to the negative effects of foreign protectionism.

· The trade composition measures indicate that commodity and energy exporting countries had a generally inferior record for many of the economic performance variables. In particular, both groups recorded high negative correlations with the speed of integration index (r = -0.367 and -0.332 respectively) and export value growth (r = -0.410 and -0.369). Overall, larger countries also generally experienced somewhat higher GDP growth rates although these relationships were not statistically significant when China and India were excluded from the tests.

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[13]Since the WSJ-Heritage indices assign higher values to less "enlightened" governance policies the negative correlations were anticipated. That is, countries that pursued more appropriate trade and governance policies were rewarded with higher rates of economic growth.

Table 1. Analysis of the Correlation Between Economic Performance, Trade Policy Measures, Country Size, and the Composition of Exports

	Economic Performance Variables							
	General Measures				Export Growth		Import Growth	
Dependent Variables	Level of GDP per Capita	Speed of Integration	Openness of Economy	Growth of GDP	Value Terms	Volume Terms	Value Terms	Volume Terms
Domestic Trade Distortions								
Average Tariffs	-0.436*	-0.177	-0.282*	0.088	0.034	-0.029	-0.113	-0.106
Average Tariff & Para-Tariffs	-0.392*	-0.041	-0.318*	0.048	0.084	0.034	-0.082	-0.032
NTB Frequency of Use Index	-0.292*	-0.048	-0.283*	0.003	0.018	-0.117	0.074	0.016
Heritage Trade Policy Index	-0.457*	-0.446*	-0.292*	-0.262*	-0.240*	-0.172	-0.337*	-0.423*
External Constraints								
Average Tariffs Encountered	0.293*	0.439*	0.218*	0.436*	0.477*	0.462*	0.440*	0.521*
NTBs Encountered	-0.119	0.346*	-0.008	0.276*	0.398*	0.329*	0.212*	0.337*
Overall Governance Index	-0.613*	-0.460*	-0.564*	-0.347*	-0.232*	-0.415*	-0.259*	-0.474*
Size Variables								
Population	-0.130	-0.009	-0.166	0.335*	0.229*	0.211*	0.241*	0.208*
Gross Domestic Product	0.165	0.176	-0.095	0.360*	0.389*	0.338*	0.329*	0.367*
Trade Composition Dummies								
All Commodity Exports[1]	-0.077	-0.367*	-0.032	-0.171	-0.410*	-0.292*	-0.221*	-0.317*
Energy Exports[2]	0.260*	-0.332*	0.052	-0.215*	-0.369*	-0.107	-0.314*	-0.323*

[1]This variable takes a value of unity if the share of commodities in total exports exceeds 75 percent.
[2]This variable takes a value of unity in the share of energy products in total exports exceeds 75 percent.

*Statistically significant at the 95 percent confidence level

· Some of the correlations between average tariffs and paratariffs, or frequency indices of NTB use in the developing countries, and performance variables like GDP or export growth are not statistically significant. However, the correlations between the more comprehensive WSJ-Heritage trade index and almost all the performance variables are high and significant.[14] Our analysis of the underlying data indicates a relatively high level of variation exists in the relative importance of tariffs as opposed to nontariff barrier in many countries. Some countries rely primarily on tariffs for protection while others are primarily dependent on nontariff barriers (see Annex Table 7 for evidence on this point). As a result, any statistical tests that do not account for the joint impact of these import barriers (as does the WSJ-Heritage index) will not adequately reflect the true influence of domestic trade policies on economic performance. This has important implications since most previous analyses of the influence of domestic trade barriers on economic performance have not utilized measures that reflect the combined influence of both types of interventions.

B. The Influence of Governance Variables on Economic Performance

Given the very strong correlations between the overall WSJ-Heritage governance index and the economic performance measures, Table 2 provides a more detailed analysis of the influence of the individual components of this measure. Here, each of the ten component governance indices were correlated with the measures of economic performance. It should again be noted that higher WSJ-Heritage index values are associated with "inferior" governance policies so negative correlations were expected. To assist in evaluating this information, the lower portion of the table shows the number of significant negative correlations between the governance indices and each economic performance measure, as well as the average correlation value. Similarly, the right-most column in the table shows the number of significant correlations between each of the performance variables and the WSJ-Heritage indices. These indicate that banking regulations and the composite WSJ-Heritage Index are significantly correlated with all

[14]However, the tariff and NTB frequency of use measures are highly (negatively) correlated with several of the performance variables like openness of the economy and the level of GDP per capita, The latter indicates that poorer countries generally have higher domestic trade barriers which may, in turn, explain why they failed to achieve higher income levels.

of the performance variables while wage and price controls are correlated with only three.

Perhaps the key point reflected in Table 2 is that significant negative correlations are generally observed between almost all of the WSJ-Heritage governance indices and the economic performance measures[15] Trade policy appears to have played a key role in accounting for a country's level of GDP and speed of integration into the global economy, and has also had a significant influence on export and import growth, and the growth of GDP. In terms of the number of significant correlations, domestic trade and policies relating to banking regulations appear to have had the greatest overall impact on economic performance (respectively, 7 and 8 of the correlations were significant), while wage and price controls had the least important impact where only 3 of the correlations were significant.

Which economic performance variables appear to have been most, or least, affected by the governance policies. The correlation between the general WSJ-Heritage index and the level of GDP per capita ($r = -0.613$) is the strongest in the table followed by the speed of integration index ($r = -0.460$) and "openness" ($r = -0.564$) measures. The lowest values occurred for the correlations with the export and import value growth rates which may be the result of a failure to differentiate between commodity or energy exporting countries in these tests. Overall, seven or more of the correlations between the trade, government intervention, and banking policy measures and performance variables are significant as opposed to five or fewer in the case of taxation, monetary policy or wage and price control measures.

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[15]The reader should note that the previous analysis (Table 1) showed other variables such as the commodity composition of exports and country size often had a significant impact on the performance variables, yet Table 2 does not account for the separate influence of these factors. These omissions might cause the correlations between the governance and performance measures to understate the real importance of the former if there is a strong relationship between the WSJ-Heritage indices and these variables..

Table 2. Analysis of the Correlation Coefficients Between Governance Measures and Economic Performance Variables

	Economic Performance Variables								
	General Measures				Export Growth		Import Growth		Number of Significant Correlations
Governance Index Measure	Level of GDP per Capita	Speed of Integration	Openness of Economy	Growth of GDP	Value Terms	Volume Terms	Value Terms	Volume Terms	
Overall Governance Index	-0.613*	-0.460*	-0.564*	-0.347*	-0.233*	-0.415*	-0.259*	-0.474*	8
Trade Policies	-0.457*	-0.446*	-0.292*	-0.262*	-0.240*	-0.172	-0.337*	-0.423*	7
Policies Concerning Taxation	-0.469*	-0.223*	-0.419*	-0.082	-0.027	-0.326*	-0.064	-0.282*	5
Government Intervention	-0.125	-0.419*	-0.232*	-0.224*	-0.267*	-0.297*	-0.243*	-0.338*	7
Monetary Policies	-0.363*	-0.083	-0.363*	-0.279*	-0.119	-0.315*	-0.153	-0.206*	5
Foreign Investment Regulations	-0.085	-0.335*	-0.204*	-0.210*	-0.281*	-0.255*	-0.156	-0.271*	6
Banking Regulations	-0.299*	-0.350*	-0.315*	-0.202*	-0.210*	-0.241*	-0.243*	-0.367*	8
Wage and Price Controls	-0.192*	-0.186*	-0.331*	-0.149	0.035	-0.038	-0.042	-0.109	3
Security of Property Rights	-0.582*	-0.382*	-0.464*	-0.340*	-0.185	-0.400*	-0.184	-0.429*	6
Overall Regulatory Controls	-0.680*	-0.363*	-0.563*	-0.305*	-0.167	-0.398*	-0.107	-0.354*	6
Black Market Index	-0.660*	-0.357*	-0.518*	-0.300*	-0.106	-0.280*	-0.145	-0.368*	6
MEMO ITEMS									
No. of Significant Correlations with Expected Sign	9	10	11	9	5	9	4	10	--
Average Correlation Coefficient	-0.411	-0.396	-0.388	-0.245	-0.163	-0.285	-0.175	-0.329	--

[1]This variable takes a value of unity if the share of commodities in total exports exceeds 75 percent.
[2]This variable takes a value of unity in the share of energy products in total exports exceeds 75 percent.

*Statistically significant at the 95 percent confidence level.

C. The Combined Influence of Trade and Governance Policies

The previous correlation tests showed a strong significant relationship existed between most of the individual governance and trade policy indices and the performance measures. Countries which adopted policies conducive to industrialization and growth generally performed better that those where such supportive policies were absent. This finding raises the question of just how much of a country's economic performance is attributable to the combined influence of trade and governance policies and how much is accounted for by other factors. For answers, we employ a regression model similar to that used by Sachs and Warner (1998) for analyzing the sources of economic growth. Our analysis does, however, differ somewhat in that we focus on an alternative measure of performance - the World Bank's (1996) index of the speed with which countries are integrating into the global economy. Our selection of this new performance variable was largely based on the fact that a number of published studies already show enlightened trade policies are linked with higher economic growth rates, so there appeared to be little need to further verify this relationship. However, since we include the initial level of each country's GDP per capita among the independent variables our selection of the integration index as performance variable the tests should provide new insights concerning current thinking on economic "convergence." That is, we attempt to determine whether poorer countries are integrating faster into the global economy once one accounts for the influence of governance and

other policy variables.[16]

Our empirical model for investigating these questions is structured as follows:

· The performance variable

-- The World Bank index of the speed of a country's integrating into the global economy.

· The policy variables

-- The WSJ-Heritage governance index net of its trade policy component. That is, since we wanted to examine the influence of the later separately we recalculated the WSJ-Heritage index to reflect the average of the nine other policy variables.

-- The WSJ-Heritage trade policy index.

-- Other major "policy induced" variables. We felt that one defect of the WSJ-Heritage index was that it did not adequately reflect governance policies bearing on the development of "human capital" - a resource which appears to have been a major factor contributing to economic growth. While various proxies could be used we employed the secondary school enrollment rate for the population in the relevant age group. This measure should reflect the extent to which national policies make continuing education available to the general population.

-- We also felt WSJ-Heritage was weak in reflecting governance policies toward transport and communications - a number of studies highlight the importance of these factors in today's international business environment. Recently compiled cross-country surveys provide information on the number of years waiting time required for a telephone installation and we adopted this measure as a proxy for governance policies bearing on ease of access to communication facilities.[17] Unfortunately, the education and communications measures were

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[16]The World Bank (1996, pp. 25-32) conducted a number of empirical tests that show lines of causation run from: (i) improved governance policies, to (ii) a faster pace of global integration, to (iii) accelerated economic growth and also discussed the theoretical bases for these relations. In one test, the Bank used estimates by Sachs and Warner (1995) of the dates when countries established open policy regimes and found a statistically significant increase in the countries' speed of integration in the five years after opening compared with the five years before it. The Bank also computed speed of integration indices for 115 countries and showed that the growth in GDP per capita over 1984-93 was significantly greater for countries deemed to be either "fast" or "moderate" integrators as opposed to those whose integration was held to be "weak" or "slow".

[17]Statistics on waiting times were drawn from the International Telecommunications Union, 1997 World Telecommunication Development Report. For the countries in our sample these waiting times range from a few weeks to over 10 years as in the case of Tanzania, Malawi, Nepal, Syria and Algeria.

not available for 5 countries included in Table 1 and 2 correlation results so they had to be dropped from these further empirical tests.

· The structural variables

-- The initial income level as measured by the log of GDP per capita was chosen. The rationale here was to make our empirical results comparable to those of previously published "growth" studies. Other analyses show that, once account is taken of relevant structural variables, poorer countries tend to grow faster than those with higher incomes. Our approach should show whether a similar "convergence" phenomena is occurring for the speed of economic integration.

-- A dummy variable was added to identify countries where primary commodities accounted for 75 per cent or more of total exports. This variable was included given its strength in the previous correlation tests.

· Variables reflecting the influence of external barriers

-- The average level of tariffs facing each country's exports.

-- The NTB coverage ratio for each country's exports. Both measures were included to further test the influence of foreign protectionism as a constraint to integration, and to help assess the validity of arguments that external trade barriers are a major constraint to developing countries economic prospects..

Table 3 presents the results when these variables were tested in a multiple regression equation. Equation (1) shows the policy and structural variables account for over 50 percent of the variation in the speed of integration index and all take the anticipated directional sign. Four variables, the composite WSJ-Heritage index, the trade policy index, the commodity export dummy and the GDP measure are significant at the 99 percent level with the other variables achieving significance at somewhat lower confidence levels.

Table 3

Cross-Country Regression Results
(Dependent Variable is the Speed of Integration into the Global Economy)

	Regression		
Explanatory Variable	1	2	3
Composite Heritage Index	-0.192 (2.789)	-0.194 (2.667)	-0.203 (2.776)
Heritage Trade Policy Index	-0.248 (2.954)	-0.248 (2.934)	-0.247 (2.920)
Communications Waiting Time	-0.053 (1.870)	-0.053 (1.858)	-0.055 (1.903)
Secondary Enrollment Rate	0.007 (1.751)	0.007 (1.376)	0.005 (1.057)
Commodity Export Dummy	-0.635 (3.142)	-0.644 (2.763)	-0.697 (2.565)
Log of GDP	-0.180 (2.020)	-0.181 (2.005)	-0.157 (1.612)
Foreign Tariff Level	--	-0.005 (0.082)	-0.017 (0.275)
Foreign NTB Incidence	--	--	.007 (0.923)
Standard Error	0.758	0.754	0.758
R^2	0.545	0.546	0.549

Note: T statistics are shown in parentheses

Two key findings follow from equation (1). First, the highly significant negative coefficients show countries that adopted less restrictive trade and governance policies were able to globally integrate faster than countries where liberal policies were not implemented. This conclusion parallels the findings of related analyses showing liberal trade policies were closely correlated with higher economic growth rates. Second, once the influence of variations in structural factors and national policies are accounted for equation (1) shows that poorer countries are integrating more rapidly into the global economy than others. These findings of "integration convergence" correspond directly to those relating to economic growth.

Equations (2) and (3) add the variables on foreign tariffs and nontariff barriers. Both terms fail to achieve statistical significance, and the NTB coverage ratio even takes the wrong directional sign.[18] As is evident from comparisons of the R^2 their inclusion does nothing to improve the explanatory power of the model. The general message that follows from these results is that foreign protectionism appears to be a far less important constraint to improved economic performance than is the nature of the national trade and governance policies a country adopts.

IV. POLICY IMPLICATIONS FOR AFRICA

The previous correlation and regression analyses demonstrated that trade and other government policies directly influence economic performance and the speed of integration. Countries that pursued less oppressive governance and trade policies generally achieved significantly higher levels of GDP per capita, they had higher trade and economic growth rates,

[18]We also tested an "African dummy" variable in equation (1) to determine if countries in this region were in some way different. We find no evidence of this as the dummy failed to achieve statistical significance.

and were more successful in integrating into the global economy. Although these findings have important implications for all developed and developing countries, they raise questions of particular relevance for Sub-Saharan Africa (SSA). Sub-Saharan Africa has been increasingly marginalized in both trade and the global economy over the last two or three decades (Collier 1995 or Ng and Yeats 1997), and the region has a far below average record for almost all measures of economic performance.[19] Furthermore, analyses of the external environment show Africa faces very low tariffs which, due to preferences, are generally below those encountered by other exporters of the same products and relatively few nontariff barriers (Amjadi et. al. 1996). Foreign protectionism is not responsible for Africa's sub-par trade and economic performance. Are Africa's wounds self-inflicted and the result of inappropriate domestic policies?[20] If so, just how much of an improvement in economic performance might be expected if SSA countries were to implement less restrictive national governance policies.

For answers, we proceeded as follows. First, the countries used in our regression tests were split into two groups, namely, Sub-Saharan African and all other developing countries.

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[19]Sub-Saharan Africa's share of world trade fell dramatically over the past forty years. Specifically, UNCTAD reports that Sub-Saharan Africa's share of global exports went from 3.1 percent of global exports in 1955 to 1.2 percent in 1990 - a decline that implies annual trade losses of roughly $65 billion (that is, exports would have been $105 billion in 1990 instead of the actual $40 billion). The most striking feature of Africa's export performance since the early 1960s is the major erosion in the region's ability to compete in international markets. For example, in 1962-64 copper alloys were the region's single largest commodity export with Sub-Saharan Africa supplying 32 percent of all OECD imports. By 1991-93, however, Africa's market share had dropped more than 22 percentage points to less than 10 percent. Similarly, Africa's market shares for other key commodities such as vegetable oils, palm oil, palm nuts and kernels, and groundnuts dropped from 47 to 80 percentage points below earlier levels. For the thirty most important non-oil exports combined, Africa's average share declined by more than 11 percentage points (from 20.8 percent to 9.7 percent), which implies annual trade losses of about $11 billion (see Ng and Yeats 1997). That figure is almost equal to OECD official development assistance to Africa in 1991 - $10.9 billion.

[20]See Bauer (1984) for an early and perceptive analysis of the harm that developing countries may do to themselves through the adoption of inappropriate trade and commercial policies. As far as one aspect of commercial policy is concerned, Amjadi and Yeats (1995) show that unsound African policies that greatly reduced competition for transport services greatly elevated freight costs for exports and has been a major factor behind the erosion of Africa's trade shares in major OECD markets.

We then calculated both the average WSJ-Heritage trade and composite governance policy indices for each group, along with their average speed of integration indices. These computations showed Africa's overall governance index was about 17 percent higher (more restrictive) than the average for all the other countries (which had an index value of 2.88), while the African trade policy index was about 20 percent above the 3.52 average for non-SSA countries. Sub-Saharan Africa, as a region, applies governance policies that are less conducive to industrialization and growth than in almost all other developing countries. We also found the latter had a positive average speed of integration index of 0.33 (indicating they were successfully integrating into the global economy) - the corresponding value for Africa (-0.485) was negative, thereby indicating that ties between Africa and the global economy were growing at a far slower pace, or even deteriorating.

We next postulated two different scenarios for change in both the African trade and composite governance policy indices. Under the first, we sought to determine the likely impact of the African countries improving their governance policies sufficiently to bring their average index values up to levels of other non-African countries. Under our second scenario we sought to determine the likely impact of a one point improvement in the African indices - that is, lowering their average trade policy index value from 4.23 to 3.23, and overall governance index from 3.36 to 2.36. Reductions of these magnitudes would place Africa in a policy range similar to that for countries like Sri Lanka, Panama, Belize or Jordan - which are not exceptional in any important respect.

Under our first scenario (improvement of Africa's governance indices to the "other country" average) the speed of integration index for the region is predicted to rise by more than

55 percent (to -0.22 from -0.49), but still takes a negative sign. Examination of the regression coefficients reported in Table 3 suggests this is due to the fact that most Sub-Saharan African countries' exports are highly concentrated in primary commodities and exporters of these goods appear to be at a disadvantage in integration efforts. However, under the scenario assuming a one point improvement in both the trade and overall WSJ-Heritage governance indices, the SSA integration index changes from negative to slightly positive. These findings suggest African governments have options for reversing the region's long-term marginalization in the global economy by implementing national policies more conducive to improved economic performance.[21]

Table 4 examines this assertion in more detail by providing information on the governance practices in individual African countries. Shown here are the WSJ-Heritage composite governance indices and, given its strong relationship to general economic performance (see Table 2), the value of the trade policy index. In addition, the table also reports some of the WSJ-Heritage observations concerning trade policy and facilitation in each country. Finally, to provide a standard for comparison, the table provides similar information for Hong Kong, Singapore, and Taiwan (China) - countries that achieved some of the highest economic and export growth rates over the last three decades, and were also among the most successful in their global integration efforts. The latter were chosen since it has been suggested that the quality and nature of governance in the East Asian countries explain why their growth rates were

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[21]An important question is what impact changes in governance and trade policy indices might have on some other economic performance variables. For answers, we re-ran the first regression in Table 3 with: (i) GDP per capita, and (2) the growth in GDP per capita as performance variables. Our analysis of the regression coefficients suggests that a one point increase in the trade and overall WSJ-Heritage indices could raise GDP per capita more than seven-fold above its current level (about $500) and raise its annual growth rate by about 4 percentage points. The R^2 value for the level of GDP per capita regression was over 60 percent.

Table 4. The Quality of Governance and Trade Policies in Some Sub-Saharan Countries

Country	Governance Index		General WSJ-Heritage Observations on National Trade Policies
	Overall	Trade Policy	
Angola	4.35	5	Angola is virtually a closed market. Its market is highly protected behind a wall of trade quotas and import licenses which are required for all imports. Corruption in the customs service hamper imports.
Burkina Faso	3.50	5	Burkina Faso maintains a 5 percent customs, a variable duty on imports, a 4 percent statistical tax, among other taxes. The country also applies import bans and quotas.
Cameroon	3.60	5	Cameroon's average tariff is about 30 percent. Cameroon also uses countervailing and anti-dumping duties to protect inefficient domestic industries. Import licenses are required and at least 100 items are subject to import quotas.
Chad	3.80	5	Chad's average tariff is 15.8 percent, but the biggest deterrent to trade remains an unsafe and un-navigable road system. Overall travel after dark is highly dangerous.
Congo	3.75	5	Congo's current average tariff is unknown. Tariffs on intermediate and consumer goods range from 35 to 50 percent. The biggest non-tariff barrier is red tape, an inefficient customs, and theft of imported goods by government officials.
Djibouti	3.00	4	The largest barriers to imports in Djibouti are customs corruption, inadequate infrastructure to bring products to the country, and poor banking and financial services.
Ethiopia	3.60	4+	Ethiopia applies a maximum tariff rate of 80 percent. The customs bureaucracy is cumbersome and inefficient.
Gambia	3.60	4	Gambia's average tariff is 13.5 percent. Some import bans are applied.
Ghana	3.10	4+	Ghana's average tariff is 12.5 percent. Handling and customs delays are frequent.
Guinea	3.45	5	Guinea has a flat tariff rate of 33 percent for almost all imports. Licenses are required for "restricted" goods like cement, rice, flour and other agricultural products.
Ivory Coast	3.35	5	The average tariff rate is 25.5 percent and there are quotas on some goods. The are government monopolies on imports of some goods and customs fraud is extensive.
Kenya	3.05	4	Kenya's average tariff is 13.5 percent. The customs system is prone to corruption. Some imports including sugar, maize, wheat and milk are banned.
Madagascar	3.24	4+	Madagascar's average tariff is 13.5 percent. Other taxes significantly raise the price of imports.
Malawi	3.55	5	Malawi's average tariff is 17.6 percent and it imposes strict import licenses on some agricultural goods.

Table 4. continued

Country	Governance Index		General WSJ-Heritage Observations on National Trade Policies
	Overall	Trade Policy	
Mali	3.10	3	Mali's average tariff is 10 percent but the government also applies a complex system of fiscal duties ranging from 5 to 30 percent. Import licenses are required.
Mauritania	3.80	5	Mauritania's average tariff is 20.3 percent and strict import inspections are required.
Mozambique	4.00	3+	Mozambique's tariff rates range from 5 to 35 percent. The customs service is riddled with corruption.
Namibia	2.95	4	Namibia's average tariff is 24.4 percent. Imports must have associated letter of credit.
Niger	3.70	5	Niger's average tariff is 18.3 percent with some duties as high as 60 percent. Niger maintains some import bans.
Nigeria	3.20	5	Nigeria's average tariff is 18.3 percent and all goods are subject further charges totalling 6 percent. The list of banned imports (including maize, eggs, processed wood and textiles) is substantial.
Rwanda	4.20	5	Import tariffs range from 10 to 60 percent. Rwanda's borders are essentially closed due to civil unrest.
Senegal	3.25	5	Senegal's average tariff is 23.6 percent. It applies import bans and strict licensing requirements.
Somalia	4.70	5	Tariffs play a minor role in restricting imports. A major impediment is corrupt customs officials confiscating goods.
Sudan	4.20	5	Sudan's average tariff is 24 percent and imports of about 30 products are banned.
Tanzania	3.25	3	Tariffs average 8.6 percent. The major hindrance to trade is the inefficient customs system.
Uganda	2.90	4	Tariffs range from 10 to 30 percent. Some imports are banned.
Zaire	4.20	4	Tariffs are at moderate levels and the greatest barrier to trade is customs corruption.
Zimbabwe	3.70	5	The average tariff is 30 percent. Customs procedures are complex and some textile and clothing imports are banned.
MEMO ITEM			
Hong Kong	1.25	1	Hong Kong levies no import tariffs and has very few nontariff measures. Hong Kong is one of the World's most accessible markets. Singapore has exceptionally low tariffs of 0.3 to 0.5 percent and no nontariff barriers to trade. Singapore's customs procedures are minimal.
Singapore	1.30	1	
Taiwan	1.95	2	

so much greater than those in Africa.[22]

Several important points are reflected in Table 4. First, for the 28 African countries included 16 (57 percent) received the lowest possible rating (an index value of 5) for their trade policies, while an additional 9 (34 percent) received a "very poor" rating of 4 or higher. Furthermore, the trade policy indices for all but three of the African countries (Mali, Mozambique and Tanzania) were assigned values higher than the average composite governance measure. African policies relating to trade, therefore, appear to be even more onerous than the generally very repressive measures applied in other areas like banking, taxation, or security of property rights. In short, both our regression results and information presented in Table 4 strongly support the proposition that a major cause of Sub-Saharan Africa's poverty and dismal economic performance lies in the nature of the policies these nations have imposed on themselves.[23]

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[22]According to the World Bank (1997, p. 32) "Governments enormous impact on development is well illustrated by contrasting economic performance of developing countries in Sub-Saharan Africa and East Asia. In 1960 incomes per capita in much of East Asia were only a little higher than in Africa. Governments in the two regions were also similar in size, although not in composition. African governments were already spending more on consumption, primarily on public employment. By the mid-1990s, however, incomes in East Asia were more than five times those in Africa and government consumption in Africa, relative to GDP, had ballooned to one-and-a-half times that in East Asia. The sources of this divergence are complex, but it is widely believed that the superior performance of the state in East Asia - the limits it set on its own growth, the soundness of the policies it adopted, and the effectiveness with which it delivered services - made a powerful contribution to the growing gap in the quality of life experienced by the average citizen between these two parts of the world."

[23]The World Bank (1997, p. 14) reached similar conclusions concerning the functioning of the state and quality of governance policies in Sub-Saharan Africa in stating "Many countries in Sub-Saharan Africa are suffering from a crisis of statehood - a crisis of capability. An urgent priority is to rebuild state effectiveness through an overhaul of public institutions, reasserting the rule of law, and credible checks on abuse of state power. Where links between the state, the private sector, and civil society are fragile and underdeveloped, improving the delivery of public and collective services will require closer partnerships with the private sector and civil society."

V. SUMMARY AND CONCLUSIONS

Economists generally argue that the level and structure of a country's own trade barriers, as well as the "quality" of other government policies, have a major influence on industrialization, growth, and economic performance. However, a problem previously encountered in attempts to test these relations empirically was that few common objective measures of the quality of governance were available across a wide range of countries. Furthermore, comparable statistics on tariffs and nontariff barriers in developing countries were not easily accessible. Several new empirical sources of information help fill these information gaps and were used to test the relationships between economic performance and: (i) the quality of national governance, (ii) the nature and restrictiveness of a country's own domestic trade polices, and (iii) the level of foreign trade barriers which a country faces in external markets.

The results show countries adopting less restrictive or "outward oriented" trade and governance policies generally achieved significantly higher levels of GDP per capita, they typically experienced significantly higher growth rates for exports, imports and GDP, and also were more successful in integrating into the global economy.[24] Our findings also extended what is currently known about economic convergence. Once the influence of structural and policy variables is accounted for poorer countries appear to be integrating faster into the global

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[24]In our opinion an important conceptual error has been incorporated in a few recent studies that examined Africa's recent trade performance. Ng and Yeats (1996) show that the massive erosion of SSA countries import shares in OECD markets implies annual export earnings losses of $65 billion. In contrast, Rodrik (1998) presents cross-country regression using recent data and argues the, given their present size, African trade is about at expected levels. This line of reasoning fails to recognize that if Africa had adopted more enlightened economic and governance policies over the last three or four decades their economies would now be larger - as would their actual trade levels.

economy than others. The message which follows is that the quality and nature of a country's own domestic policies have a major impact on its rate of development, integration and growth. This point is of paramount importance. In international forums, like the United Nations or World Trade Organization, some developing countries argued that their relatively poor economic performance is the result of an unfavorable external environment. Our findings provide little support for this contention. Protectionism in foreign markets can reduce trade and economic growth rates below otherwise achievable levels, but countries often have a wide range of options for offsetting its adverse effects by adopting governance and trade policies that are more supportive of commercial activity.

This study tested its empirical findings in a "case study" involving Sub-Saharan Africa. Specifically, it attempted to determine if inappropriate trade and governance policies explain the relatively dismal experience of Sub-Saharan Africa as reflected in almost all available measures of achievement or economic performance? The evidence strongly supports this proposition. Indices of the quality of local governance show African countries have generally adopted the most inappropriate (restrictive) fiscal, monetary, property and wage policies, and their own trade barriers (including customs procedures that are a major constraint to commercial activity) are generally among the highest of any other regional group. James Wolfenson, President of the World Bank, graphically highlighted the importance of such governance issues in a recent (January 1998) address to the UN Economic Commission for Africa in Addis Ababa.

"But what do we see when we look at Africa? We see that Africa is missing out. Of $300 billion in total foreign private capital flows, Sub-Saharan Africa received about $12 billion. And of that, only $2.6 billion in direct investments - a trivial number in relation to the size and potential of this continent. But we also have to face facts. It is not just

because the private sector is myopic that less than 1 percent of direct investment comes to Africa. Africa needs to set itself up to attract private investment, and that means a clean regulatory environment, it means a judicial system that works, it means property rights, corporate law, predictability in taxes and, in relations to governments, it means capacity-building, health care, and the infra-structure necessary to go along with it. And it means corruption must be stamped out. Without these, private investors simply will not invest."

The implications of this assessment, and our findings, are that Africa's most pressing economic and trade problems will primarily have to be resolved by Africa itself and not by outsiders.[25] However, a graphic description by the World Bank (1997, p. 162) clearly illustrates the magnitude of the problems many African countries face in attempting to improve the functioning of their governments and governmental policies,

"Achieving a turnaround in the effectiveness of the state [in Sub-Saharan Africa] will not be easy since the roots of state failure are many and complex. Chief among them has been a continuing struggle between traditional forms of governance and social organization (often based on tribes, lineages, and language and kinship groups) and modern forms of government. High military expenditure and dysfunctional behavior of military personnel (in the absence of other checks and balances) have been important impediments. These have often reduced the transparency and accountability of public institutions to the extent that governments have felt a decreasing need to explain and justify their actions to the domestic population."

Implementing the needed improvements in governance will require major commitments, resolve and dedication that many African leaders typically have not exhibited in the past. However, for past and present problems to be effectively addressed such changes are clearly of fundamental importance.

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[25]The World Bank (1997, pp. 157-67) provides a thoughtful agenda for improving the quality of governance policies in developing countries. As a general proposition it states (p. 157) that "Efforts to restart development in countries with inefficient states must start with institutional arrangements that foster responsiveness, accountability, and the rule of law."

Annex
Profiles of Protection in Developing Countries

The regression and correlation tests employed in this study showed an important inverse relationship generally exists between the restrictiveness of a country's trade barriers and measures of economic performance. That is, *ceterus paribus*, the higher the combined level of national import barriers the lower the level of its GDP per capita, the slower its rate of export growth and its speed of global integration. Although economic performance was shown to depend on other factors, such as those relating to the overall quality of governance, the finding concerning the importance of domestic trade policies calls for further analysis of the level and variance of tariffs and NTBs in developing countries. The purpose of this annex is to provide relevant empirical information regarding this point and to try to determine if their are common cross-country factors influencing the use of these trade interventions.

Although trade barrier information for individual countries was collected for this study, and is presented in the detailed appendix tables which follow, some aggregation procedure was needed to help identify any common underling characteristics of these trade regimes, and to hold the this annex's presentation to manageable levels. For this purpose a World Bank scheme that classified countries both by geographic region and by income level was employed - see Annex Table 1 for a list of countries in each group. That is, the 80 individual countries for which trade barrier information was available were classified in ten groups like low income African, middle income Africa, or low income Asia.[25] In addition, a previous World Bank study (Ng and Yeats 1996) identified 14 developing countries that achieved compound annual growth rates for non-oil exports that exceeded the corresponding rate of growth in world trade by at least one percentage point over the last three decades. Given these countries' superior export performance there was an obvious interest in determining whether their domestic trade policies were significantly less restrictive than those of other countries. As such, the tariff and nontariff barrier data for these 14 countries were tabulated individually and then aggregated into a "fast growing exporters" country group.[26]

A. The Level of Tariffs and Para-Tariffs

Annex Table 2 shows the average tariffs (both including and excluding para-tariff measures) for the country groups employed in this analysis. The unweighted average tariff on all imports by the 80 developing countries is 22.4 percent, with the low income countries' tariff (32.2 percent) averaging about 14 percentage points above that for the middle income group.[27] This point was expected from the

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[25]Several modifications were made to the Bank scheme. First, little or no trade regime information was available for some of the country-income level groups (like Low Income Americas) so they were not included in our analysis. Second, we have chosen not to report results for regional breakdowns of the high-income Non-OECD countries due to the similarities in their trade restrictions. That is, the level of post-Uruguay Round tariff and NTB protection in these countries is now generally so similar that little would be gained by showing more disaggregate data for these country groups.

[26]These countries include: Republic of Korea, Singapore, Saudi Arabia, Bahrain, Taiwan (China), Thailand, Qatar, Malaysia, Indonesia, Jordan, Mexico, Hong Kong, Kuwait and Papua New Guinea.

[27]This difference is significant at the 95 percent level. Table 1 also shows average tariffs and para-tariffs computed using weights based on total imports of all individual countries. As anticipated, these are lower than the simple averages due to the fact that, *ceterus paribus*, countries with lower import duties would import more.

Annex Table 1
Classification of Countries by Region and Income Levels

Country Group	Countries Included
Low Income Africa	Benin, Burkina Faso, Burundi, Central African Republic, Cote d' Ivoire, Ethiopia, Ghana, Guinea, Kenya, Madagascar, Malawi, Mozambique, Nigeria, Sierra Leone, Somalia, Sudan, Tanzania, Uganda, Zaire, Zambia, Zimbabwe
Middle Income Africa	Angola, Cameroon, Congo, Mauritius, Senegal
Low Income Asia	Bangladesh, China, India, Nepal, Pakistan, Sri Lanka
Middle Income Asia	Indonesia, Korea, Malaysia, Papua New Guinea, Philippines, Thailand
Other European Countries	Romania, Turkey, Yugoslavia
Middle East	Bahrain, Iran, Jordan, Oman, Saudi Arabia, Syria, Yemen
North Africa	Algeria, Egypt, Libya, Morocco, Tunisia
Latin America	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Jamaica, Mexico, Nicaragua, Paraguay, Peru, Trinidad and Tobago, Uruguay, Venezuela
High Income Non-OECD	Bahamas, Cyprus, Hong Kong, Kuwait, Qatar, Singapore, Taiwan (China), United Arab Emirates
Fast Growing Exporters	Republic of Korea, Singapore, Saudi Arabia, Bahrain, Taiwan (China), Thailand, Qatar, Malaysia, Indonesia, Jordan, Mexico, Hong Kong, Kuwait and Papua New Guinea.

Source: Drawn from World Bank (1996)

previous correlations (Table 1) which show countries with relatively low trade barriers have achieved significantly higher levels of GDP per capita. The standard deviation for the low income countries' tariffs (shown in parentheses) is about 17 percent which indicates a fairly wide range exists in the level of import duties within this group. Indeed, analysis of the underlying tariffs shows these may vary from an average of about 6 percent in the case of Madagascar to over 50 percent for Bangladesh, Burkina Faso and Pakistan (see the Appendix Tables which follow). Regression tests indicate that differences in GDP per capita can account for about 20 percent of the variation in developing countries' average tariffs.

Unlike the high income non-OECD countries, Annex Table 2 shows developing countries rely far more heavily on para-tariff charges which may take various forms like customs surcharges and surtaxes, taxes on foreign exchange transactions, import license fees or consular invoice fees (see Box A1). Once the ad valorem equivalents of these additional charges are included the average incidence of developing countries' duties increases to about 30 percent, which is five times the level of all OECD import charges and close to 40 percent in the case of the low income developing countries.[28]

On a geographic basis the Middle East and Eastern European countries had the lowest average tariff outside the high income non-OECD group (12.5 percent) followed by Latin America (18.1 percent) and middle income Asia (19 percent). The highest average tariffs occur in low income Asian countries (45.8 percent), but this figure does not account for recent substantial tariff reductions made by China and India.[29] African import charges are also well above average than those in most of the other developing country groups.

Annex Table 2 shows that the averages for tariffs plus para-tariffs combined are 3 to 10 percentage points higher than those for tariffs alone, but no significant changes occur in the relative levels of protection in the country groups.[30] The greatest differences between the two averages occur for the Middle East, Middle Income Africa, and Low Income Asian countries where the unweighted averages increased by 10 to 16 percentage points - the smallest increase (3.5 percentage points) occurred in Middle Income Asian countries.[31] The table also shows that the tariff and para-tariff averages decline

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[28]According to the UNCTAD data these special charges added 40 percentage points to India's nominal tariff of 53 percent, and more than doubled the incidence of Costa Rican, Iran, Jordan, Libya, Madagascar, Mauritius, Trinidad and Tobago, Turkey and Zimbabwe's tariffs.

[29]An important question is how do the current levels of tariff protection in developing countries compare with those that were historically applied in OECD markets. A report by the Carnegie Foundation indicates current OECD members tariffs averaged about 40 percent in the 1940s which was higher than most of the averages reported in Annex Tables 1 and 2. However, before the completion of the Kennedy Round in 1968, OECD tariffs had been reduced to an average rate of about 18 percent which was about 7 points lower than the average level of tariffs and para-tariff protection in all developing countries today.

[30]The Pearsonian correlation coefficient between the tariff and total import charge rates was 0.90 which is statistically significant at the 1 percent confidence level.

[31]A relevant question is why countries resort to para-tariffs instead of tariffs. Various factors appear to be at work. Countries may apply customs surcharges to help rectify temporary balance of payments problems - as the United States did in the early 1970s. Countries have also resorted to para-tariff charges to try and circumvent WTO legal bindings on MFN tariffs, while in other cases these charges are tied to the use or development of some specific infra-structure project like road or port improvements.

Annex Table 2. Average Tariffs and Para Tariffs on All Imports of Selected Country Groups

	Simple Average		Weighted Average	
Country Group[a]	Tariffs[b]	Tariffs and Para Tariffs[c]	Tariffs	Tariffs and Para Tariffs
Low Income Africa	28.4 (13.8)	33.9 (14.6)	23.9	29.1
Middle Income Africa	27.5 (8.2)	38.1 (13.1)	25.0	35.8
Low Income Asia	45.8 (21.9)	55.8 (29.5)	39.2	47.7
Middle Income Asia	19.0 (10.7)	22.5 (9.6)	17.0	20.9
Other Europe	12.5 (3.2)	17.8 (5.2)	11.1	15.6
Middle East	12.5 (5.5)	28.6 (30.9)	11.1	23.4
North Africa	25.1 (5.1)	32.0 (4.0)	21.2	27.9
Latin America	18.1 (8.6)	24.4 (15.2)	15.9	21.1
All Low Income Countries	32.2 (17.5)	38.7 (21.0)	27.3	33.2
All Middle Income Countries	18.8 (9.2)	26.7 (17.6)	16.6	23.4
All Developing Countries	22.4 (14.8)	29.1 (20.2)	19.4	25.3
Fast Growing Exporters	10.8 (9.0)	13.2 (10.2)	10.0	12.6
High Income Non-OECD	9.1 (10.2)	10.0 (11.4)	8.5	9.4

[a]Country group classifications are based on those in World Bank, Global Economic Prospects and the Developing Countries 1995, (Washington: World Bank, 1995). This table is based on a sample of 80 developing and 23 industrial countries.
[b]Figures in parenthesis are the standard deviation of the tariff rates within the group.
[c]Includes additional fiscal and other import charges such as stamp taxes, customs surtaxes, foreign exchange taxes, etc. Figures in parentheses are the standard deviation of the import charges within the group.

Sources: UNCTAD (1987)(1994) and OECD (1996).

Box A1. UNCTAD's Classification Scheme for Trade barriers Measures

PARA-TARIFF MEASURES
1. Customs Surcharges
2. Additional Taxes and Charges
   - Taxes on Foreign Exchange Transactions
   - Stamp Taxes
   - Import License Fees
   - Consular Invoice Fee
   - Statistical Taxes
   - Taxes on Sensitive Products
   - Other Additional Charges
3. Internal Taxes and Charges
   - General Sales Taxes
   - Excise Taxes
   - Taxes and Charges for Specific Products
   - Decreed Customs Valuation

PRICE CONTROL MEASURES
1. Administrative Pricing and Minimum Import Prices
2. Voluntary Export Price Restraint
3. Variable Levies or Charges
4. Anti-Dumping Measures
5. Countervailing Measures

FINANCE MEASURES
1. Advance Payment Requirements
2. Multiple Exchange Rates
3. Restrictive Foreign Exchange Allocation
4. Regulations for Terms of Payment

QUANTITY CONTROL MEASURES
1. Non-Automatic Licensing
2. Quotas
   - Global Quotas (Allocated or Unallocated
   - Bilateral Quotas
   - Seasonal Quotas
   - Quotas Linked with Other Purposes
3. Prohibitions
4. Export Restraint Arrangements
   - Voluntary Export Restraints
   - Orderly Marketing Arrangements
   - Multifiber Arrangement
5. Enterprise Specific Restrictions

MONOPOLISTIC MEASURES
1. Single Channel or State Trading
2. Compulsory National Services

TECHNICAL MEASURES
1. Technical Regulations
2. Pre-Shipment Inspection
3. Special Customs Formalities

as one moves from lower to higher income groups (Low and Middle income Africa is an exception). One possible explanation for this inverse tariff-income relation is that many low income countries must rely more heavily on customs revenues for state finance since other forms of taxation may be more easily evaded. Infant industry considerations may also be a factor here. As one moves from the middle to low income countries industries may become "more infantile" and require higher levels of protection to survive.[32]

B. Sectoral Tariffs and Para-Tariff Protection

A sectorial analysis of our tariff statistics shows that developing countries' duties on manufactured goods are generally higher than those on any other product category with the exception of foodstuffs (see Annex Tables 3 and 4). For all developing countries combined tariffs and para-tariffs averaged 30 percent on all manufactured goods and are about 8 percentage points higher on the "other manufactures" group. The latter generally consists of labor intensive items like textiles, clothing, footwear, and leather, wood and paper manufactures which are classified in Standard International Trade Classification (SITC) groups 6 and 8. This sector are also generally afforded the highest tariff and nontariff protection in OECD markets. Another common feature is that developing countries' countries' tariffs also appear to "escalate" or increase sharply as a specific good experiences further processing (Yeats 1987)

Annex Table 4 examines the sectorial level of tariff and para-tariff protection for primary products and also indicates parallels exist here with the pattern of OECD protection. Foodstuffs are among the most highly protected products in all regional groups with the overall developing country average duty (34 percent) exceeding that for all manufactures by 4 percentage points.[33] In contrast, protection for products that are generally employed as manufacturing inputs, like agricultural raw materials or ores and metals, typically have relatively low levels of protection so as not to undermine the competitive position of their end-use products.

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[32]Some developing countries made major progress in liberalizing their trade regimes since the 1980s, often in the context of structural adjustment reforms supported by the World Bank (see Nash and Thomas 1991 for a discussion). Comparisons of data for the 1980s (UNCTAD 1987) with our current statistics show the greatest tariff reductions of about 15 to 25 percent occurred in Middle Eastern countries and from 12 to 2 percent in high income non-OECD countries. The latter decline was almost entirely due to Singapore and Hong Kong's almost complete removal of all tariffs. Most of the fast growing exporters also implemented substantial reforms in the mid-1980s as their tariffs were cut roughly in half to the levels shown in Annex Table 2. Until recently Low Income Africa made little progress in implementing tariff reforms.

[33]As a result of the Uruguay Round OECD nontariff barriers on agricultural products were converted to tariffs - often at very high levels. Ingco (1995) shows that Japan's "tariffied" NTBs provide levels of protection exceeding 200 percent for wheat and sugar and over 500 percent for rice. In the European Union rice, sugar, and dairy products all have levels of protection exceeding 200 percent. United States sugar producers are protected by tariffs of approximately 200 percent.

Annex Table 3. Regional Countries' Sectorial Averages for Tariffs and Para Tariffs on Manufactured Goods

Country Group[a]	All Manufactures	Chemicals	Iron and Steel	Transport Equipment and Machinery	Other Manufactures
Low Income Africa	33.8	25.9	25.3	24.8	43.0
Middle Income Africa	39.2	27.9	33.9	35.0	47.7
Low Income Asia	58.2	48.9	50.3	48.0	68.5
Middle Income Asia	24.0	16.7	12.6	20.3	30.3
Other Europe	18.8	14.5	9.7	16.1	23.2
Middle East	30.2	18.0	15.4	20.3	42.2
North Africa	31.9	20.9	16.3	26.6	41.2
Latin America	24.4	15.6	15.2	18.7	34.4
All Low Income Countries	39.3	31.0	30.9	30.0	48.6
All Middle Income Countries	27.8	18.0	16.7	21.7	36.5
All Developing Countries	29.9	21.4	20.6	23.3	38.1
Fast Growing Exporters	14.1	10.3	8.9	12.5	16.6
High Income Non-OECD	10.7	8.4	8.3	9.6	11.3

[a]Country group classifications are based on those in World Bank, **Global Economic Prospects and the Developing Countries 1995**, (Washington: World Bank, 1995). See Annex Table 1 for a listing of the countries in each group.

Sources: UNCTAD (1987)(1994) and OECD (1996).

Annex Table 4. Regional Countries' Sectorial Averages for Tariffs and Para Tariffs on Primary Products

Country Group[a]	All Primary Products	Foodstuffs	Agricultural Materials	Ores and Metals	Mineral Fuels	Non-Ferrous Metals
Low Income Africa	33.8	42.1	29.5	23.1	20.9	27.5
Middle Income Africa	34.9	38.2	32.5	29.2	31.9	34.1
Low Income Asia	49.2	59.4	41.9	36.5	33.6	45.9
Middle Income Asia	18.4	24.6	15.9	9.4	14.5	14.8
Other Europe	15.4	23.5	10.6	8.1	10.1	8.3
Middle East	24.7	34.0	17.7	15.2	14.9	17.1
North Africa	32.1	47.7	19.9	17.2	15.1	20.2
Latin America	21.7	27.9	17.4	16.0	16.0	14.8
All Low Income Countries	37.2	45.9	32.3	26.1	23.7	31.6
Middle Income Countries	23.9	31.5	18.7	16.1	16.9	17.5
All Developing Countries	26.8	34.0	22.2	18.5	18.3	21.3
Fast Growing Exporters	10.5	13.4	8.9	6.5	9.0	8.9
High Income Non-OECD	8.2	8.4	8.1	7.0	7.5	8.0

[a]Country group classifications are based on those in World Bank, **Global Economic Prospects and the Developing Countries 1995**, (Washington: World Bank, 1995). See Annex Table 1 for a listing of countries in each group.

Sources: UNCTAD (1987)(1994) and OECD (1996).

C. The Importance of Nontariff Trade Measures

In addition to tariffs and other import charges, countries often apply different types of nontariff measures (NTMs) to imports (see Box A1 for a listing).[34] UNCTAD compiled one of the most comprehensive databases on these measures, which are applied at the tariff line level, and often was able to match this information with actual trade data. However, there are important limitations of the UNCTAD database in that it does not provide any information on a measure's nominal equivalent, nor does it provide any indication of changes in the intensity of application. If, for example, quantitative restrictions are eased to permit increased imports this would not be reflected in UNCTAD's statistics which only indicate whether or not an NTM is applied. Similarly, if the administration of health and safety regulations, or technical standards, becomes more, or less, rigorous this fact would not be reflected in the database. Third, no information is available on measures like export subsidies or special export rebates that might be considered nontariff "distortions" to trade. These types of export incentives have been a major source of contention, particularly in agriculture (wheat, sugar and dairy products) as well as ferrous metals. These limitations are probably the reason why the previously reported correlations between the NTM indices and the economic performance measures were generally weak or not statistically significant.

For empirical analyses involving NTM inventories several summary indices have been used. One measure is a frequency index (F_j) showing the percentage of tariff lines covered by some pre-selected group of nontariff measures. This index (F_j) is defined by,

$$(A.1) \quad F_j = (\Sigma D_i N_i \div N_t) \cdot 100$$

where N_i is tariff line i, D_i is a dummy variable that takes a value of unity if one or more NTMs is applied to the item or zero otherwise, and N_t is the total number of tariff lines in the product group. The above summation is made over all countries exporting to the importing country j.[35] This index was

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[34]As Baldwin (1970) and Walter (1972) show the problem of defining what measures constitutes a nontariff barrier and what measures do not has been more difficult than many might suppose. Laird and Yeats (1990) outline the methodologies used for estimating NTM ad valorem equivalents and also provide information on how the UNCTAD NTM database was constructed. The latter source also provides information on previous applications of the database in research and policy studies.

[35]If matched tariff-line-level import data are available, in which individual countries of origin for shipments are identified, a second index showing the share of total imports subject to NTMs can be computed. This trade coverage measure (C_j) is defined as,

$$(A.2) \quad C_j = ((\Sigma D_{i,t-m} \cdot V_{i,t-n}/\Sigma V_{i,t-n}) \times 100$$

where $V_{i,t-n}$ represents the value of imports in tariff-line item i in year (t-n), and $D_{i,t}$ is a dummy variable that takes a value of unity if an NTM is applied to the item and zero otherwise. If n and m are zero the index is based on current trade values, otherwise it is expressed in a base year trade weights. In some cases they may be quite misleading in this respect. For example, no trade may occur because of a highly restrictive NTM - in which case the coverage ratio would be zero. The frequency measure (equation A.1) would not be so affected which is why economists may compare the results from the two indices. Note, that frequency indices assign all traded goods equal weights. That is, an NTM on (say) umbrellas would be treated the same as one on automobiles.

Annex Table 5. Average Tariffs plus Para Tariffs and Nontariff Barrier Frequency Ratios for Sectorial Groups of Developing Countries

	Average Tariff plus Para Tariffs			NTM Frequency Ratio		
Country Group[a]	All Items	Primary Products	All Manufactures	All Items	Primary Products	All Manufactures
Low Income Africa	33.8	33.8	33.8	39.0	40.0	38.6
Middle Income Africa	38.1	34.9	39.2	13.7	11.0	14.4
Low Income Asia	55.8	49.2	58.2	23.7	24.8	23.1
Middle Income Asia	22.5	18.4	24.0	10.1	12.3	9.2
Other Europe	17.8	15.4	18.8	41.9	43.5	41.1
Middle East	28.6	24.7	30.2	26.6	28.6	25.8
North Africa	32.0	32.1	31.9	25.1	33.2	21.8
Latin America	24.4	21.7	24.4	14.6	17.1	13.4
All Low Income Countries	38.7	37.2	39.3	35.6	36.6	35.1
All Middle Income Countries	26.7	23.9	27.8	18.7	21.1	17.7
All Developing Countries	29.1	26.8	29.9	23.5	25.6	22.6
Fast Growing Exporters	13.2	10.5	14.1	5.7	11.0	3.6
High Income Non-OECD	10.0	8.2	10.7	9.4	14.1	7.6

[a]Country group classifications are based on those in World Bank, **Global Economic Prospects and the Developing Countries 1995**, (Washington: World Bank, 1995). See Annex Table 1 for a listing of the countries in each group.

Sources: UNCTAD (1987)(1994) and OECD (1996).

employed in our correlation tests (see Table 1).

Annex Table 5 shows NTM frequency indices for the 14 country groups which were computed using entries for the so called "hard core" measures whose intent is normal the restriction of trade. These are measures like quotas, variable import levies, or restrictive licensing arrangements. We have, however, excluded some NTMs like health and sanitary requirements which may be applied for legitimate social reasons. The NTM ratios were computed for all items as well as for primary products and manufactures separately. Finally, the table also shows average nominal protection from all tariffs and paratariff charges. The intention here is to provide some initial indication on the joint (complementary or offsetting) use of nontariff measures and from import charges. Annex Table 8 will address this question in more detail.

Several important points are evident from these statistics. First, there is considerable variation in the value of NTM frequency ratios which suggests important differences exist in reliance on these types of interventions across the country groups. Low Income African countries and the "Other Europe" register the highest frequency of NTB use with about 40 percent of all tariff line items affected by these measures.[36] This ratio is about two and one-half times higher than that for the high income non-OECD countries and about six to seven times higher than in the fast growing exporters group.[37]

Second, an analysis of the underlying data shows that quantitative restrictions (QRs) are the most widely applied type of NTM used by developing countries. Quantitative restrictions are applied to approximately 30 percent of all Low Income African imports, while about 9 percent of imports encounter some other nontariff measures.[38] For all developing countries combined the QR ratio on all imports (18.3 percent) is only 5 points lower than that for all forms of nontariff measures. Quantitative restrictions constitute over 90 percent of the nontariff measures applied in 6 of the 14 country groups and at least 75 percent of the measures employed in all of the groups with one exception (Other Europe). This point has important (negative) efficiency implications, particularly with regard to the effects of tariffs

[36]The relatively high ratio for the countries classified in "other Europe" is largely due to Turkey which applies customs surcharges and QRs to some major imports.

[37]The OECD ratios reported in Annex Table 4 reflect the situation prior to the Uruguay Round and there is every indication that they will be significantly reduced as a result of the negotiations. Specifically, the Round achieved agreement that all forms of nontariff barriers applied to agricultural products would be converted to tariffs while all "voluntary" export restraints (VERs) would be eliminated. In addition, all nontariff barriers imposed under the Multifiber Arrangement (MFA) would be phased out over a ten year period. As a result, Low and Yeats (1995) estimate that the 17 percent OECD NTM frequency index shown in Annex Table 4 will fall to 3 to 4 percent once the Uruguay Round agreement is fully implemented.

[38]The problem of "stacking" or the multiple application of different types of NTMs on a single product could potentially complicate these comparisons. For example, if price control measures were also applied to a high share of the items facing QRs a comparison of the results presented in Annex Tables 6 and 7 would cause the importance of the former to be understated. As an example, US sugar and beef imports recently faced both a quota and a variable levy.

Annex Table 6. Regional Countries' Sectorial Average Nontariff Barrier Ratios for Primary Products

Country Group[a]	All Primary Products	Foodstuffs	Agricultural Materials	Ores and Metals	Mineral Fuels	Non-Ferrous Metals
Low Income Africa	40.0	45.9	36.4	30.8	35.9	35.2
Middle Income Africa	11.0	13.6	10.6	5.4	5.9	10.8
Low Income Asia	24.8	29.8	23.6	16.8	31.1	11.0
Middle Income Asia	12.3	20.2	5.0	4.1	15.1	0.7
Other Europe	43.5	44.0	46.2	40.1	32.0	47.6
Middle East	28.6	36.4	24.8	18.1	29.9	14.4
North Africa	33.2	58.5	7.7	6.8	34.1	6.9
Latin America	17.1	26.7	10.1	3.5	17.3	6.0
All Low Income Countries	36.6	42.3	33.6	27.7	34.8	29.8
Middle Income Countries	21.1	30.6	13.9	8.9	20.5	10.0
All Developing Countries	25.6	33.8	19.9	14.8	25.2	16.2
Fast Growing Exporters	11.0	19.8	3.9	2.9	9.4	2.6
High Income Non-OECD	14.1	23.3	7.1	4.5	18.5	4.7

[a]Country group classifications are based on those in World Bank, **Global Economic Prospects and the Developing Countries 1995**, (Washington: World Bank, 1995). See Annex Table 1 for a listing of the countries in each group.

Sources: UNCTAD (1987)(1994) and OECD (1996).

Annex Table 7. Regional Countries' Sectorial Average Nontariff Barrier Ratios Manufactured Goods

Country Group[a]	All Manufactures	Chemicals	Iron and Steel	Transport Equipment and Machinery	Other Manufactures
Low Income Africa	38.6	33.1	37.8	36.8	42.0
Middle Income Africa	14.4	8.3	14.1	12.0	18.4
Low Income Asia	23.1	18.6	27.4	14.5	29.0
Middle Income Asia	9.2	9.0	7.6	16.0	6.0
Other Europe	41.1	34.4	60.6	40.2	42.2
Middle East	25.8	22.2	18.5	26.9	27.7
North Africa	21.8	17.2	6.0	13.4	30.0
Latin America	13.4	10.7	9.5	7.6	18.0
All Low Income Countries	35.1	29.9	35.5	31.9	39.1
Middle Income Countries	17.7	14.3	14.2	15.0	20.9
All Developing Countries	22.6	19.0	20.5	20.1	25.6
Fast Growing Exporters	3.6	4.7	4.8	3.5	3.3
High Income Non-OECD	7.6	9.1	5.9	9.4	6.6

[a]Country group classifications are based on those in World Bank, **Global Economic Prospects and the Developing Countries 1995**, (Washington: World Bank, 1995). See Annex Table 1 for a listing of the countries in each group.

Sources: UNCTAD (1987)(1994) and OECD (1996).

and some other forms of nontariff restrictions.[39]

A more disaggregate analysis of the incidence of NTMs (Annex Tables 6 and 7) shows that foodstuffs and the "other manufactures" group (the latter is largely composed of goods that are labor intensive in production) generally have the highest frequency of NTB application. About 45 percent of low income Africa's and other Europe's imports of foodstuffs encounter NTMs which the ratio for North Africa approaches 60 percent (Annex Table 6). About 40 percent of the low income countries imports in the other manufactures group face NTMs which is about 5 points higher than the corresponding ratio for all manufactured goods (Annex Table 7).

NTM use in developing countries is considerably higher than that in OECD members, but the sectorial distribution of these measures' application is generally similar. Perhaps the largest difference occurs for the mineral fuels group where approximately 25 percent of all developing countries' imports encounter some form of restriction (Annex Table 6) while the corresponding ratio for the OECD countries is under 3 percent.

Does NTM protection generally substitute for, or reinforce, protection by tariff and paratariff charges. The evidence from Annex Table 5 provided some evidence in support of the latter proposition since low income countries higher than average import charges and relatively high NTM frequency ratios. Annex Table 8 provides a different perspective on this question by first classifying countries in three groups, that is those with low, medium, and high tariffs (see the first column) and then further assigns these countries to one of three groups based on a low, medium or high frequency of NTN use. This cross-classification is helpful in showing how developing countries jointly apply these trade interventions.

The profiles that emerge from Annex Table 8 reveal considerable variation in the use of these trade restrictions across individual countries. One group of about 21 developing countries (Angola, Argentina, Bahrain, etc.) has set both tariffs and NTBs at relatively high levels which would reinforce each measure's protective effects. However, there are a number of cases where NTB protection appears to substitute for tariffs (countries like Cyprus, Ecuador, Guinea, etc.) or where high tariffs are applied with few NTBs (Bahamas, Burundi, etc.). In short, what Annex Table 8 shows is that individual developing countries apply these restrictions in a variety of different ways - sometimes in a complementary and sometimes in an offsetting fashion.

This latter finding concerning the wide variation in the ways individual countries utilize tariffs and NTBs has important implications for future empirical tests of the relationship between trade policies and growth. Empirical analyses that correlate (say) rates of GDP growth with either: (i) tariff levels, or (ii) some index of NTM usage have generally produced weak or even non-significant results. Our data

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[39]As noted that there is reason to believe the detrimental impact of quantitative restrictions and some other NTMs is considerably greater than that of tariffs. Specifically, if foreign producers become increasing efficient relative to domestic suppliers in developing countries they may be able to erode a tariffs protective effects over time. This would increase developing countries' nationals' access to lower cost foreign products, which would improve living standards and the regions ability to compete in foreign markets. Under quotas and other quantitative restrictions, however, no such beneficial adjustment is possible as the volume of goods that can be imported are subject to fixed ceilings. Instead of potentially narrowing, as in the case of tariffs, the gap between developing countries that use these measures standard of living and production efficiency would further worsen relative of other countries.

Annex Table 8. The Relation Between Average Tariffs and Nontariff Measures in 80 Developing Countries.

Average Tariff Level	Nontariff Measure Frequency Index (%)			Number of Countries	Average Tariff Rate
	Low (under 10%)	Medium (10 to 20%)	High (Over 20%)		
Low Tariffs (under 10%)	Angola, Argentina, Bahrain, Bolivia, Chile, Colombia, Costa Rica, Hong Kong, Korea, Kuwait, Madagascar, Malaysia, Mexico, Oman, Papua New Guinea, Qatar, Romania, Saudi Arabia, Senegal, Singapore, U.A.E.	El Salvador, Jordan	Cyprus, Ecuador, Guinea, Haiti, Nicaragua, Syria, Taiwan (China), Turkey, Yugoslavia	33	9.2%
Medium Tariffs (15 - 25%)	Algeria, Brazil, Cote d' Ivoire, Guatemala, Indonesia, Jamaica, Nepal, Paraguay, Thailand, Venezuela	Guyana, Libya, Uganda, Uruguay	Cameroon, Ghana, Iran, Malawi, Morocco, Mozambique, Peru, Philippines, Trinidad & Tobago, Yemen, Zaire, Zimbabwe	25	18.2%
High Tariffs (over 25%)	Bahamas, Burundi, Central African Rep., Congo, Nigeria, Somalia, Sri Lanka, Zambia	Benin, China, Pakistan, Sudan	Bangladesh, Burkina Faso, Egypt, Ethiopia, India, Kenya, Mauritius, Sierra Leone, Tanzania, Tunisia	22	35.6%
MEMO ITEM					
Number of Countries	39	10	31		
Average NTM Ratio	2.9%	13.9%	52.4%		

indicate a measure that reflects the way tariffs or NTBs are being employed jointly (as does the WSJ-Heritage trade policy index) must be used in such analyses if the results are to be empirically valid.

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Appendix Tables

Table A.1: Weighted and Unweighted Average Tariffs /a and Total Import Charges /b for All Products in 80 Developing Countries

	80 LDCs /c	Unwgt Ave Tariffs	Unwgt Ave Para+ Tariffs	Import Wgt Ave Tariffs	Imp Wgt Para+ Tariffs	Unwgt Ave All NTMs	Imp Wgt Ave All NTMs	Populat-ion 1994 (Mill)	GDP 1994 ($ Mill)	GDP Per Capita 1994 ($)
1	Benin **	37.4	49.4	30.7	42.2	17.0	31.1	5.3	1522	287.2
1	Burkina Faso **	60.8	76.8	52.8	67.5	80.6	86.8	10.1	1856	183.8
1	Burundi	36.9	37.9	28.9	29.9	0.3	0.8	6.2	1001	161.5
1	Centr Afr Rep **	32.0	39.3	26.7	33.7	5.1	16.7	3.2	872	272.5
1	Cote d'Ivoire **	23.3	25.3	21.5	22.9	6.6	20.6	13.8	6716	486.7
1	Ethiopia	29.6	31.2	23.2	24.7	22.5	16.7	54.9	4688	85.4
1	Ghana **	29.6	33.0	29.3	31.0	48.4	38.4	16.6	5421	326.6
1	Guinea **	8.9	8.9	8.4	8.4	38.2	39.9	6.4	3395	530.5
1	Kenya	43.7	44.7	36.8	37.8	37.8	29.8	26.0	6860	263.8
1	Madagascar	6.1	40.1	5.5	36.0	1.7	1.7	13.1	1918	146.4
1	Malawi	15.2	15.2	13.1	13.1	91.3	91.8	9.5	1302	137.1
1	Mozambique **	15.6	25.6	14.5	24.5	56.9	61.0	15.5	1467	94.6
1	Nigeria	32.8	39.8	26.5	33.5	8.8	7.6	108.0	35200	325.9
1	Sierra Leone **	25.8	25.8	21.8	21.8	100.0	100.0	4.4	843	191.6
1	Somalia **	30.8	31.0	24.6	24.8	6.3	13.0	8.8	917	104.2
1	Sudan **	56.6	56.6	47.0	47.0	10.0	8.0	27.4	5989	218.6
1	Tanzania	29.8	29.8	22.8	22.8	79.7	80.4	28.8	3378	117.3
1	Uganda **	19.9	19.9	18.1	18.1	13.9	19.7	18.6	4001	215.1
1	Zaire	20.7	20.7	17.1	18.2	100.0	100.0	42.5	8769	206.3
1	Zambia **	29.9	29.9	25.8	25.8	0.0	0.1	9.2	3481	378.4
1	Zimbabwe	10.1	30.1	7.6	27.6	93.6	97.4	10.8	5432	503.0
2	Angola **	11.6	20.6	11.2	20.0	0.7	2.2	10.4	7287	700.7
2	Cameroon **	32.0	42.2	27.0	37.0	20.7	15.3	13.0	7470	574.6
2	Congo **	32.0	33.2	26.7	28.7	4.6	5.3	2.6	1578	606.9
2	Mauritius	27.6	60.3	30.1	63.2	35.2	34.8	1.1	3385	3077.3
2	Senegal **	34.2	34.2	29.8	29.9	7.2	14.9	8.3	3881	467.6
3	Bangladesh	81.2	83.2	65.1	67.1	49.4	55.1	117.9	26164	221.9
3	China	37.5	37.5	30.6	30.6	11.3	26.4	1190.9	522172	438.5
3	India	53.0	95.2	42.6	76.6	62.6	61.3	913.6	293606	321.4
3	Nepal	16.1	16.1	16.8	16.8	0.7	0.8	20.9	4048	193.7
3	Pakistan	61.1	73.3	56.2	68.7	14.5	24.7	126.3	52011	411.8
3	Sri Lanka	26.1	29.2	23.7	26.1	3.8	11.2	17.9	11712	654.3
4	Indonesia	17.0	20.1	12.6	16.3	2.7	7.3	190.4	174640	917.2
4	Korea	11.1	12.3	10.0	14.1	2.6	29.8	44.5	376505	8460.8
4	Malaysia	12.8	17.6	11.2	15.4	2.1	5.1	19.7	70626	3585.1
4	Papua N Guinea **	7.0	14.2	6.3	13.1	2.6	1.3	4.2	5403	1286.4
4	Philippines **	28.1	33.1	24.8	29.8	44.9	63.6	67.0	64162	957.6
4	Thailand	37.8	37.8	36.9	36.9	5.5	8.2	58.0	143209	2469.1
5	Romania **	16.7	16.7	13.6	13.6	0.0	0.1	22.7	30086	1325.4
5	Turkey	9.0	24.7	9.0	22.1	96.4	89.7	60.8	131014	2154.8
5	Yugoslavia	11.8	12.0	10.8	11.0	29.2	33.6	4.8	14017	2920.2
6	Bahrain **	7.1	7.1	7.2	7.2	1.5	3.5	0.6	4548	7580.0
6	Iran **	20.7	100.9	15.1	70.1	99.3	98.8	62.5	63716	1019.5
6	Jordan **	13.8	28.0	13.7	27.1	12.9	16.8	4.0	6105	1526.3
6	Oman **	2.9	2.9	2.1	2.1	3.6	4.0	2.1	11628	5537.1
6	Saudi Arabia	12.1	12.1	12.0	12.1	3.9	8.0	17.8	117236	6586.3
6	Syria **	14.8	27.5	12.6	24.5	36.6	36.2	13.8	35502	2572.6
6	Yemen **	16.2	22.0	15.1	20.5	28.7	34.6	14.8	3884	262.4
7	Algeria	22.9	24.9	16.4	18.9	9.5	6.9	27.4	41941	1530.7
7	Egypt	33.5	33.5	22.9	22.9	45.2	49.9	56.8	42923	755.7
7	Libya **	18.3	34.7	20.7	36.5	10.3	9.4	5.2	20623	3966.0
7	Morocco **	23.5	36.1	22.1	34.6	27.6	39.7	26.4	30803	1166.8
7	Tunisia	27.5	30.6	24.0	26.7	32.7	42.5	8.8	15770	1792.0
8	Argentina	10.6	19.4	9.7	16.6	0.2	3.1	34.2	281922	8243.3
8	Bolivia	16.7	16.7	16.5	16.5	2.0	3.5	7.2	5506	764.7
8	Brazil	13.2	15.4	14.7	16.7	1.5	14.3	159.1	554587	3485.8
8	Chile	10.9	19.9	10.7	21.2	0.1	0.4	14.0	51957	3711.2
8	Colombia	11.8	11.8	11.7	11.7	1.7	2.3	36.3	67266	1853.1

8	Costa Rica **	21.1	61.7	16.4	37.2	0.8	4.1	3.3	8281	2509.4
8	Ecuador	9.3	11.2	8.2	10.2	63.6	52.2	11.2	16556	1478.2
8	El Salvador **	21.1	21.1	15.8	15.8	19.2	10.7	5.6	8116	1449.3
8	Guatemala **	22.8	22.8	17.3	17.3	7.4	13.1	10.3	12929	1255.2
8	Guyana **	17.4	17.5	16.3	16.4	16.0	15.5	0.8	540	675.0
8	Haiti **	11.6	16.8	10.3	14.6	30.8	27.6	7.0	1632	233.1
8	Jamaica **	17.3	17.5	16.2	16.7	6.6	16.7	2.5	4241	1696.4
8	Mexico	13.4	16.9	12.3	15.8	3.9	19.0	88.5	377115	4261.2
8	Nicaragua **	22.1	24.6	17.1	19.6	27.8	26.5	4.2	1833	436.4
8	Paraguay	15.4	15.4	12.9	12.9	1.8	4.6	4.8	7826	1630.4
8	Peru **	48.9	66.3	39.4	56.1	53.4	55.5	23.2	50077	2158.5
8	Trinidad & To **	17.3	43.1	16.2	41.6	23.4	33.5	1.3	4792	3686.2
8	Uruguay **	27.5	28.5	26.6	27.6	14.1	20.6	3.2	15539	4855.9
8	Venezuela	16.4	17.4	14.6	16.2	2.4	2.8	21.2	58257	2748.0
9	Bahamas **	32.3	33.8	31.6	33.1	0.1	0.1	0.3	3375	11250.0
9	Cyprus **	17.5	23.5	13.9	19.9	32.2	47.5	0.7	7189	10270.0
9	Hong Kong	0.0	0.0	0.0	0.0	0.5	0.9	6.1	131881	21619.8
9	Kuwait	4.2	4.2	4.2	4.2	3.5	6.7	1.6	24289	15180.6
9	Qatar **	4.2	4.2	4.3	4.3	1.3	1.2	0.6	7661	12768.3
9	Singapore	0.4	0.4	1.9	1.9	0.3	0.7	2.9	68949	23775.5
9	Taiwan, China	9.7	9.7	7.4	7.4	35.9	27.4	21.0	241014	11476.9
9	United Arab Em. *	4.5	4.5	4.3	4.3	1.0	0.5	2.4	35405	14752.1

Notes: /a Based on available MFN tariffs or applied rates.
/b Include additional fiscal and other import charges.
/c Countries with ** are the late 1980s tariffs, where country classifications are: 1=Low income Afr
2 = Middle Income Africa, 3 = Low income Asia, 4 = Middle income Asia, 5 = Other Europe,
6 = Middle East, 7 = North Africa, 8 = Latin America, 9 = High Income Non-OECDs.

Sources: UNCTAD, Directory of Trade Regimes, 1994 and Handbook of Trade Control Measures of Developing Countries, 1987; GATT/WTO, Trade Policy Review, various issues, 1990-95, and World Bank, WDR 1996.

Table A.2: Trends in Average Tariff levels for 80 Developing Countries (Unweighted in %)

	80 LDCs (Sources)	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
1	Benin /b,p						48.3	47.5	37.4		37.8	42.0	40.3	40.0	41.6			13.1
1	Burundi /a	37.9						37.0		36.9					7.4			
1	Cote d'Ivoire /c,b,d,f,p	30.8	28.7	27.2	26.3	26.6	26.4	26.0	23.3	25.0	30.6	25.8			23.6	22.0	20.0	
1	Ethiopia /a		29.0							29.6							16.3	
1	Ghana /a,c,d			43.3	30.0	30.0	30.0	20.0	23.0	17.0	17.0	17.0	17.0				15.0	12.5
1	Guinea /a,p	76.4						8.9			8.2	13.0			10.8			
1	Kenya /b,c,d			40.3		41.7		39.2	39.2	41.7	37.5	43.7	34.0	33.6	22.0			13.5
1	Madagascar /a,b							6.0		6.1								7.3
1	Malawi /a,b,d,p	21.9				19.6	16.7	25.5	16.7	15.2	16.1	16.3				19.9	21.0	25.3
1	Mauritania /o,p					23.6	25.5	23.1	19.0	19.2	17.0	33.0				31.4	20.3	
1	Nigeria /a,c,d			32.6		35.0			23.8		35.0	34.3	36.4		32.8		29.0	
1	Rwanda /e								33.0				42.0		34.8			
1	Sierra Leone /a,b			25.8				25.8	25.8	41.0						39.5	21.0	
1	Somalia /b,o		35.0					30.8		23.2								
1	Sudan /a,o	50.6						56.6				43.0				24.0		
1	Tanzania /a,d			23.9				32.1		29.8	28.2	29.7		33.0	27.5	27.5	19.5	
1	Uganda /b,c,e							30.0	19.9							17.1		13.2
1	Zaire /a,b,d		23.6			23.8		22.4	22.4		20.7	24.7				34.1		
1	Zimbabwe /a,c,h				10.0			8.7	8.9		10.1				17.2	17.2		21.8
2	Cameroon /b,c,p	28.3							32.0						18.8	18.8		18.1
2	Mauritius /a,p		34.9			35.8	37.9	41.7	39.5		27.6					29.0	29.0	
2	Senegal /c,h				5.0			15.0	12.6	10.0	15.0	15.0			12.3	12.6		12.6
2	South Africa /c,d					29.0				22.0				20.0	13.9			8.8
3	Bangladesh /a,c,d				99.9			81.8		102.2	94.0			71.0	50.0	42.0		27.4
3	China /a,d			49.5				38.1	39.5			40.3		42.9	39.9	36.3		23.9
3	India /a,e,h		74.3					100.0	98.8			79.2		53.0	47.8	47.8		33.4
3	Nepal /a,e				22.1				21.0	22.6					16.1		11.0	
3	Pakistan /c,d,e,g			77.6	77.0	77.0	77.0	66.0	68.9	69.0	65.0	64.8	66.0	61.1	56.0	51.0		41.7
3	Sri Lanka /a,b,d				41.3		31.0		27.3	27.3		26.9		25.0	24.2	26.0	20.0	
4	Indonesia /a,c,d	29.0				37.0	27.0	31.5	18.1			22.0	20.3	20.0	19.4	17.0		13.2
4	Korea /b,c			23.7	23.7	21.9			22.9	18.1	12.7	11.4	11.4	10.1	8.9			9.1
4	Malaysia /a,c,h		10.6					15.8	13.6	13.0				12.8	14.3	13.0		9.1
4	Philippines /c	41.4	34.6	31.4	29.5	28.8	27.6	27.9	27.9	27.9	27.6	27.8	26.0	24.3	22.6	21.7	20.0	14.3
4	Thailand /c		32.3				41.2				40.8		37.8			23.3	23.1	
5	Czech Rep. /h,i,j							6.2	6.2			5.3			4.8	4.8		
5	Hungary /c,e,h					24.0	24.0	15.0	15.0				12.6		8.5	8.5		
5	Poland /c,h							10.9	10.9		18.3		11.7	11.7	8.5	8.5		
5	Romania /b,c							16.7					16.3	12.3			6.0	
5	Turkey /a,c,g				40.0	22.0	24.7	31.4	26.6	22.7					9.0		10.0	
5	Yugoslavia, FR /a,b,e	12.0					11.8	11.8	11.8		11.8							
6	Bahrain /b,o		1.7							7.1		3.0						4.0
6	Iran /a	20.7							20.7									
6	Israel /c,m			8.0	9.4	7.5	6.9	7.1							8.3	6.1		
6	Jordan /m	15.9	13.2	13.8	14.3	14.5	14.2	17.2	17.6	18.3	14.0	12.2	14.6	20.5			16.0	
6	Oman /b,o		1.5					2.9		3.5		2.5				5.7		6.0
6	Saudi Arabia /a,o	1.9	2.5						3.7	8.0	12.2			12.1			12.2	13.0
6	Syria /a,b,o			14.8			14.8			14.8		11.0						21.0

6	Yemen /b,o		26.0						16.2								20.0
7	Algeria /a,o,p	44.4				22.6	21.7	27.0	23.1	23.8	24.6			22.9	24.8			
7	Egypt /a,b,c		47.4					42.8	42.8		33.5		42.2			28.3	28.1	
7	Libya /a,o	13.3	15.4					18.3				27.0						
7	Morocco /a,c			54.0	36.0	33.0	27.0	23.0	20.8	24.0					22.8	24.4	25.7	
7	Tunisia /a,c,p	23.8		26.4		27.8	27.2	24.5	24.0	26.0	27.1	27.4	27.7	27.5		33.2	30.0	
8	Argentina /a,b,c,d,g			28.0			35.0	23.3	27.0	27.0	25.0	20.5	12.2	11.8	10.9		10.5	11.2
8	Bolivia /a,c						12.1	20.0	20.0	19.0	17.0	16.0	10.0	10.0	9.8	9.8	9.7	9.7
8	Brazil /a,c	44.0	49.0	48.0	48.0	49.0	51.0	51.0	51.0	41.0	35.0	32.2	25.3	21.2	14.2	10.7	11.8	
8	Chile /a,c,d,g					35.0	20.0	20.0	20.0	15.0	15.0	15.0	11.0	11.0	11.0	11.0	11.0	
8	Colombia /a,c,d,f,h					61.0		33.6	29.4	27.3	27.3	27.0	21.1	11.8	11.5	11.5	11.3	11.7
8	Costa Rica /d,e						21.1	21.1	16.4					15.0	11.7	11.2	11.2	
8	Ecuador /a,e							37.7	28.0		37.1				9.3	11.9	12.3	11.4
8	El Salvador /b,e,h							23.0	21.1		16.0				13.1	10.1	9.2	
8	Guatemala /b,e								22.8		16.0					10.8	10.1	
8	Guyana /b,e							17.4			20.0						17.0	
8	Haiti /a			27.7					11.6								10.0	
8	Jamaica /b,h,k						17.0	17.3	19.3		50.0		20.3		19.3	19.3		
8	Mexico /a,c			27.0	24.0	23.0	25.2	22.6	11.3	11.3	13.1	11.1	13.1	13.4		13.5	13.1	12.6
8	Nicaragua /b,e								22.1				8.0			17.4	10.7	
8	Paraguay /a,b	11.2				10.9				10.9			15.9	15.4		8.0	9.3	9.4
8	Peru /c	19.0	17.0	21.0	31.0	42.0	46.0	46.0	45.0	46.0	42.0	26.0	17.0	18.0	16.3	16.3		
8	Trinidad & Tobago /b,e									17.3	17.0		18.6	18.7			18.7	
8	Uruguay /b,c,h		47.0				38.0	40.0	29.1	27.5		23.0	21.5	18.2	17.0	14.7	9.9	9.7
8	Venezuela /a,b,d,l					28.0	28.0		32.9	32.9	30.6	19.0	16.0	16.4	15.7	11.8	13.4	
9	Bahamas /a	29.8					32.3											32.0
9	Cyprus /a,m				17.1				12.1	11.7	10.3	10.4	10.1					13.2
9	Hong Kong /a,c	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
9	Kuwait /a,o		3.5				3.9			4.2								
9	Qatar /b,o		1.8					4.2				5.0						
9	Singapore /a,b,c				0.3				0.3	0.3	0.4				0.4	0.4		0.4
9	Taiwan /n			31.0	31.0	30.8	26.5	22.8	19.4	12.6	9.7	9.7				11.2		
9	United Arab Emirates /b,o		1.2					4.5										4.0

Notes: -- All tariff rates are based on unweighted averages for all goods in ad valorem rates, applied rates, or MFN rates whichever data are available in a longer period.
-- Most tariff levels exclude para-tariffs or surcharges, except Cyprus, Israel, Jordan, Madagascar, Peru, Trinidad & Tobago, and Tunisia,

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Table A.3: Average Tariff Levels and Total Import Charges by Primary Products for 80 Developing Countries (Unweighted in %)

		All Primary		Food		Agric Raw Matl		Mineral Ores		Mineral Fuels		Non Fer. Metals	
	80 LDCs	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total
1	Benin **	35.0	46.8	36.7	48.4	33.4	45.3	35.9	47.8	19.1	30.4	39.8	51.8
1	Burkina Faso **	68.6	84.7	83.3	100.6	49.8	65.5	60.8	76.9	53.2	63.3	63.5	80.0
1	Burundi	50.5	51.5	75.1	76.1	35.4	36.4	23.3	24.3	16.2	17.2	25.9	26.9
1	Centr Afr Rep **	28.9	33.9	26.1	32.4	34.0	36.1	27.3	30.0	23.7	26.2	35.6	45.6
1	Cote d'Ivoire **	18.8	19.7	23.2	24.0	9.3	10.6	18.0	18.9	17.5	18.6	20.9	21.5
1	Ethiopia	26.8	28.5	39.8	41.4	16.5	18.2	13.6	15.3	5.3	7.0	18.8	20.5
1	Ghana **	28.1	32.4	26.0	26.0	30.0	48.0	29.7	29.7	29.9	29.9	30.0	30.0
1	Guinea **	9.2	9.2	9.0	9.0	10.0	10.0	9.5	9.5	10.0	10.0	7.9	7.9
1	Kenya	46.3	47.3	64.6	65.6	33.2	34.2	27.7	28.7	21.6	22.6	29.3	30.3
1	Madagascar	3.7	38.9	6.8	51.1	0.9	36.2	0.4	19.9	0.1	26.4	2.6	22.2
1	Malawi	10.6	10.6	17.8	17.8	3.9	3.9	0.3	0.3	2.9	2.9	9.6	9.6
1	Mozambique **	16.3	26.3	19.3	29.3	16.2	26.2	9.5	19.5	13.2	23.2	11.9	21.9
1	Nigeria	29.0	36.0	35.6	42.6	25.0	32.0	16.9	23.9	16.1	23.1	30.3	37.3
1	Sierra Leone **	19.4	19.4	18.2	18.2	26.8	26.8	12.6	12.6	18.7	18.7	17.5	17.5
1	Somalia **	29.8	30.6	46.0	47.5	27.2	27.4	3.0	3.0	9.7	9.7	10.4	10.4
1	Sudan **	56.6	56.6	70.9	70.9	50.3	50.3	38.3	38.3	25.4	25.4	54.2	54.2
1	Tanzania	33.9	33.9	44.4	44.4	29.6	29.6	22.5	22.5	11.5	11.5	25.0	25.0
1	Uganda **	25.2	25.2	35.9	35.9	20.5	20.5	12.0	12.0	14.8	14.8	10.6	10.6
1	Zaire	20.7	20.7	27.6	27.6	15.9	15.9	14.2	14.2	10.5	10.5	17.5	17.5
1	Zambia **	31.9	31.9	44.7	44.7	25.1	25.1	17.5	17.5	21.7	21.7	16.1	16.1
1	Zimbabwe	5.6	25.7	10.4	30.8	1.4	21.4	0.2	20.2	5.1	25.1	1.2	21.2
2	Angola **	10.6	19.6	14.1	23.1	8.2	17.2	9.4	18.4	7.0	16.0	2.0	11.0
2	Cameroon **	28.9	34.7	26.1	31.2	34.0	39.0	27.3	30.1	23.7	31.0	35.6	48.3
2	Congo **	28.9	29.5	26.1	26.9	34.0	34.1	27.3	27.3	23.7	26.4	35.6	35.6
2	Mauritius	16.6	51.7	27.7	65.8	5.8	38.7	1.5	33.9	25.7	54.9	4.8	38.8
2	Senegal **	38.9	38.9	43.9	43.9	33.4	33.4	36.4	36.4	31.3	31.3	36.9	36.9
3	Bangladesh	73.3	75.3	83.2	85.2	74.2	76.2	45.2	47.2	55.1	57.1	74.3	76.3
3	China	31.7	31.7	44.8	44.8	26.0	26.0	15.6	15.6	15.8	15.8	15.8	15.8
3	India	44.9	83.8	45.1	85.4	42.6	80.5	49.9	88.9	26.1	50.1	55.6	100.2
3	Nepal	8.9	8.9	12.6	12.6	4.0	4.0	3.6	3.6	6.6	6.6	11.1	11.1
3	Pakistan	54.1	65.7	69.9	81.2	34.6	46.1	38.5	49.3	47.6	58.5	45.9	60.1
3	Sri Lanka	26.7	29.9	41.3	47.1	17.0	18.8	13.2	14.1	13.4	13.7	11.4	11.6
4	Indonesia	13.6	17.1	20.8	25.2	8.9	11.4	4.3	6.8	4.9	7.9	9.0	11.7
4	Korea	12.9	14.5	20.9	21.7	6.5	6.5	3.2	4.3	5.5	20.2	8.3	8.3
4	Malaysia	7.3	8.7	9.4	11.5	6.6	7.3	3.5	3.8	5.0	5.6	7.2	9.5
4	Papua N Guinea **	4.5	11.8	3.3	10.2	8.4	15.9	2.1	9.6	0.8	8.3	5.7	13.2
4	Philippines **	26.9	31.9	35.8	40.8	22.7	27.7	12.6	17.6	16.0	21.0	21.4	26.4
4	Thailand	26.2	26.2	38.1	38.1	26.8	26.8	14.3	14.3	24.1	24.1	19.7	19.7
5	Romania **	13.8	13.8	23.4	23.4	8.3	8.3	4.3	4.3	3.8	3.8	1.5	1.5
5	Turkey	8.2	25.2	11.8	38.5	4.4	17.5	4.1	15.5	4.6	20.8	7.3	15.0

5	Yugoslavia	7.0	7.2	8.1	8.6	5.9	5.9	4.5	4.5	5.6	5.6	8.3	8.3
6	Bahrain **	7.5	7.6	10.2	10.4	5.3	5.3	4.8	4.8	5.0	5.0	5.3	5.3
6	Iran **	16.8	81.5	21.4	119.3	16.7	57.2	10.0	41.5	7.9	27.5	10.2	51.8
6	Jordan **	7.2	19.6	11.2	25.2	2.9	13.2	3.8	14.1	4.8	16.1	5.9	19.9
6	Oman **	2.0	2.0	2.2	2.2	1.9	1.9	1.9	1.9	1.4	1.4	2.0	2.0
6	Saudi Arabia	12.0	12.0	11.9	11.9	12.0	12.0	12.1	12.1	12.3	12.3	11.8	11.8
6	Syria **	13.1	25.1	20.4	34.8	7.7	17.7	5.9	15.5	8.8	19.7	6.2	16.2
6	Yemen **	17.9	25.0	26.4	34.5	10.2	16.9	9.5	16.7	14.0	22.3	9.4	12.8
7	Algeria	18.6	20.8	29.1	31.9	9.8	12.7	8.3	9.6	3.2	4.7	13.6	14.6
7	Egypt	50.4	50.4	98.6	98.6	9.9	9.9	8.0	8.0	7.4	7.4	11.5	11.5
7	Libya **	14.2	29.5	17.2	31.5	15.4	31.9	9.3	25.2	9.1	25.0	8.2	24.0
7	Morocco **	18.2	30.9	27.7	40.2	9.5	22.8	8.4	20.9	10.3	22.8	11.9	24.4
7	Tunisia	25.7	28.7	32.6	36.2	19.7	22.1	19.5	22.2	13.5	15.5	23.9	26.6
8	Argentina	5.2	14.0	5.0	17.6	6.5	16.5	3.3	10.5	0.3	1.7	8.9	18.5
8	Bolivia	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0	17.0
8	Brazil	7.2	9.4	11.1	13.3	5.9	8.1	0.2	2.4	1.1	3.3	5.4	7.6
8	Chile	11.0	20.5	11.0	20.9	11.0	19.9	11.0	19.7	11.0	19.0	11.0	21.8
8	Colombia	11.3	11.3	15.4	15.4	9.0	9.0	5.3	5.3	7.5	7.5	7.7	7.7
8	Costa Rica **	20.4	64.3	33.4	80.0	9.8	43.2	6.7	90.3	12.6	64.0	7.0	7.0
8	Ecuador	8.5	10.5	12.7	14.7	5.9	7.9	2.5	4.5	4.7	6.7	4.6	6.6
8	El Salvador **	19.9	19.9	32.9	32.9	9.8	9.8	6.6	6.6	9.5	9.5	7.0	7.0
8	Guatemala **	20.9	20.9	33.3	33.3	9.8	9.8	6.6	6.6	9.2	9.2	7.0	7.0
8	Guyana **	11.6	11.7	18.9	19.0	4.2	4.3	4.3	4.4	10.3	10.4	6.9	7.0
8	Haiti **	14.5	19.8	21.6	26.4	8.5	15.3	7.2	12.8	4.9	5.1	11.4	17.7
8	Jamaica **	11.6	11.8	18.9	19.2	4.2	4.6	4.3	4.3	10.3	10.3	6.9	6.9
8	Mexico	11.8	15.3	14.3	17.8	9.9	13.3	8.6	12.0	9.1	12.5	10.8	14.3
8	Nicaragua **	20.3	22.7	33.4	35.9	9.8	12.3	6.6	9.1	10.6	12.9	6.8	9.3
8	Paraguay	14.7	14.7	20.3	20.3	16.8	16.8	4.1	4.1	2.1	2.1	6.9	6.9
8	Peru **	36.1	53.2	42.7	59.3	37.8	55.3	17.8	35.3	18.7	35.6	37.9	55.4
8	Trinidad & Tob. *	11.6	34.2	18.9	36.2	4.2	31.1	4.3	31.3	10.3	37.3	6.9	33.9
8	Uruguay **	25.6	26.6	30.3	31.3	21.9	22.9	18.3	19.3	29.8	30.8	19.1	20.1
8	Venezuela	14.3	15.3	19.2	20.2	12.0	13.0	7.4	8.4	7.8	8.8	9.1	10.1
9	Bahamas **	30.3	31.8	27.0	28.5	32.9	34.4	32.9	34.4	31.2	32.7	34.4	35.9
9	Cyprus **	10.3	16.3	16.5	22.5	7.9	13.9	1.9	7.9	1.0	7.0	6.1	12.1
9	Hong Kong	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Kuwait	2.9	2.9	1.5	1.5	3.9	3.9	4.1	4.1	4.4	4.4	3.8	3.8
9	Qatar **	4.9	4.9	5.9	5.9	4.0	4.0	4.0	4.0	4.0	4.0	3.9	3.9
9	Singapore	0.3	0.3	0.1	0.1	0.0	0.0	0.0	0.0	3.4	3.4	0.0	0.0
9	Taiwan, China	6.1	6.1	7.5	7.5	3.0	3.0	0.5	0.5	2.5	2.5	2.8	2.8
9	United Arab Em. *	3.2	3.2	0.8	0.8	5.6	5.6	4.9	4.9	5.8	5.8	5.2	5.2

Sources: UNCTAD, Directory of Trade Regimes, 1994 and Handbook of Trade Control MEasures of Developing Countries, 1987.

Table A.4: Average Tariff Levels and Total Import Charges by Manufactured Product for 80 Developing Countries (Unweighted in %)

		All Manuf.		Chemicals		Iron & Steel		Mach & Equip.		Other Manuf.		All Products	
	80 LDCs	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total	Tariff	Total
1	Benin **	38.3	50.3	35.8	47.7	40.0	52.0	21.2	32.6	47.8	60.1	37.4	49.4
1	Burkina Faso **	57.9	73.8	61.8	77.6	58.8	75.1	48.4	63.7	60.8	77.1	60.8	76.8
1	Burundi	31.6	32.6	22.4	23.4	19.5	20.5	21.5	22.5	42.2	43.2	36.9	37.9
1	Centr Afr Rep **	33.0	41.2	29.1	32.3	29.0	32.6	25.1	34.2	39.2	49.6	32.0	39.3
1	Cote d'Ivoire **	25.0	27.4	20.7	22.0	20.6	21.2	16.4	17.1	31.8	35.8	23.3	25.3
1	Ethiopia	30.6	32.2	15.5	17.0	5.7	7.1	14.3	15.9	47.2	48.9	29.6	31.2
1	Ghana **	30.1	33.3	29.7	29.7	30.0	30.0	30.7	30.7	30.1	36.5	29.6	33.0
1	Guinea **	8.8	8.8	9.4	9.4	10.0	10.0	7.0	7.0	9.2	9.2	8.9	8.9
1	Kenya	42.9	43.9	30.5	31.5	23.8	24.8	25.9	26.9	59.4	60.4	43.7	44.7
1	Madagascar	7.0	40.5	0.8	30.1	4.2	22.0	7.5	32.2	9.8	51.5	6.1	40.1
1	Malawi	16.9	16.9	9.7	9.7	9.3	9.3	15.0	15.0	22.1	22.1	15.2	15.2
1	Mozambique **	15.3	25.3	10.3	20.3	19.6	29.6	9.6	19.6	21.8	31.8	15.6	25.6
1	Nigeria	34.2	41.2	22.2	29.2	19.8	26.8	20.1	27.1	48.3	55.3	32.8	39.8
1	Sierra Leone **	28.0	28.0	23.6	23.6	13.9	13.9	21.4	21.4	35.0	35.0	25.8	25.8
1	Somalia **	31.0	31.1	18.7	18.7	9.3	9.3	20.5	20.5	44.4	44.4	30.8	31.0
1	Sudan **	56.4	56.4	31.4	31.4	53.5	53.5	42.1	42.1	75.1	75.1	56.6	56.6
1	Tanzania	28.3	28.3	22.2	22.2	24.0	24.0	20.7	20.7	35.4	35.4	29.8	29.8
1	Uganda **	17.9	17.9	12.3	12.3	14.0	14.0	10.7	10.7	24.6	24.6	19.9	19.9
1	Zaire	20.7	20.7	11.6	11.6	13.2	13.2	14.2	14.2	29.1	29.1	20.7	20.7
1	Zambia **	29.1	29.1	20.3	20.3	16.2	16.2	19.6	19.6	39.3	39.3	29.9	29.9
1	Zimbabwe	11.8	31.8	3.7	23.7	6.1	26.1	7.6	27.6	18.2	38.2	10.1	30.1
2	Angola **	11.9	20.8	9.2	17.9	8.3	17.3	6.6	15.6	19.7	28.7	11.6	20.6
2	Cameroon **	33.1	44.9	29.1	35.1	29.0	41.8	25.5	39.4	39.2	52.4	32.0	42.2
2	Congo **	33.0	34.4	29.1	30.1	29.0	29.3	25.1	26.3	39.2	41.1	32.0	33.2
2	Mauritius	31.6	63.4	13.6	44.7	10.4	44.4	31.5	65.0	42.2	73.1	27.6	60.3
2	Senegal **	32.3	32.3	11.0	11.0	36.9	36.9	28.5	28.5	43.1	43.2	34.2	34.2
3	Bangladesh	84.5	86.5	71.7	73.7	82.2	84.2	75.2	77.2	95.2	97.2	81.2	83.2
3	China	39.7	39.7	25.2	25.2	13.7	13.7	30.0	30.0	54.1	54.1	37.5	37.5
3	India	56.1	99.4	60.5	104.8	56.9	101.2	43.9	87.6	60.2	102.8	53.0	95.2
3	Nepal	18.5	18.5	9.6	9.6	12.4	12.4	17.6	17.6	23.7	23.7	16.1	16.1
3	Pakistan	63.6	76.1	53.8	65.8	66.3	78.4	44.1	58.8	77.4	89.1	61.1	73.3
3	Sri Lanka	26.0	29.1	13.2	14.1	11.7	12.0	15.6	16.6	38.7	44.0	26.1	29.2
4	Indonesia	18.3	21.4	10.3	13.2	7.5	11.9	14.5	17.9	25.2	27.9	17.0	20.1
4	Korea	10.5	11.5	10.4	10.4	9.0	9.0	10.2	12.1	10.9	12.0	11.1	12.3
4	Malaysia	14.7	20.8	9.3	11.5	7.3	7.9	10.0	16.0	20.2	28.5	12.8	17.6
4	Papua N Guinea **	7.7	14.8	4.6	11.9	0.2	7.7	4.6	11.9	11.6	18.5	7.0	14.2
4	Philippines **	28.5	33.5	18.4	23.4	14.3	19.3	23.7	28.7	37.1	42.1	28.1	33.1
4	Thailand	41.8	41.8	29.9	29.9	19.6	19.6	35.3	35.3	52.5	52.5	37.8	37.8
5	Romania **	18.0	18.0	9.8	9.8	3.6	3.6	16.9	16.9	23.8	23.8	16.7	16.7
5	Turkey	9.3	24.6	8.2	24.1	6.9	12.7	8.0	17.8	10.8	29.9	9.0	24.7
5	Yugoslavia	13.7	13.8	9.5	9.6	12.7	12.7	13.7	13.7	15.6	15.9	11.8	12.0

6	Bahrain **	7.0	7.0	4.8	4.8	5.0	5.0	8.4	8.4	7.5	7.5	7.1	7.1
6	Iran **	22.2	108.2	15.4	44.4	11.9	37.8	12.3	54.7	31.3	171.2	20.7	100.9
6	Jordan **	16.2	31.1	8.0	21.5	6.4	21.7	13.6	26.4	22.3	38.8	13.8	28.0
6	Oman **	3.3	3.3	7.8	7.8	2.0	2.0	2.0	2.0	2.1	2.1	2.9	2.9
6	Saudi Arabia	12.2	12.2	11.9	11.9	13.2	13.2	11.8	11.8	12.4	12.4	12.1	12.1
6	Syria **	15.5	28.5	7.3	17.6	3.8	12.6	11.5	23.1	22.7	38.1	14.8	27.5
6	Yemen **	15.6	20.9	10.0	18.2	12.1	15.3	12.0	15.4	20.4	25.5	16.2	22.0
7	Algeria	24.6	26.6	14.2	15.3	12.3	13.3	16.3	18.6	34.9	37.1	22.9	24.9
7	Egypt	27.1	27.1	10.2	10.2	9.8	9.8	18.1	18.1	40.2	40.2	33.5	33.5
7	Libya **	19.7	36.5	6.8	22.3	1.7	16.8	19.4	36.1	27.7	45.4	18.3	34.7
7	Morocco **	25.6	38.2	18.7	31.2	8.3	20.8	20.8	33.3	33.2	45.9	23.5	36.1
7	Tunisia	28.2	31.3	23.1	25.6	18.5	20.8	24.2	26.9	33.7	37.4	27.5	30.6
8	Argentina	12.7	21.5	7.7	15.6	10.1	20.2	14.5	20.0	14.4	25.0	10.6	19.4
8	Bolivia	16.5	16.5	17.0	17.0	16.8	16.8	15.2	15.2	17.0	17.0	16.7	16.7
8	Brazil	15.6	17.8	10.8	13.0	11.0	13.2	19.4	21.6	16.3	18.5	13.2	15.4
8	Chile	10.9	19.7	11.0	19.2	11.0	19.0	10.7	19.2	11.0	20.3	10.9	19.9
8	Colombia	12.0	12.0	8.7	8.7	8.3	8.3	9.6	9.6	15.2	15.2	11.8	11.8
8	Costa Rica **	21.5	60.9	10.7	12.1	7.4	15.4	10.8	14.0	33.2	111.2	21.1	61.7
8	Ecuador	9.5	11.5	6.1	8.1	4.7	6.7	6.4	8.4	13.3	15.3	9.3	11.2
8	El Salvador **	21.5	21.5	10.6	10.6	7.4	7.4	10.3	10.3	33.6	33.6	21.1	21.1
8	Guatemala **	23.5	23.5	10.6	10.6	7.4	7.4	11.0	11.0	37.4	37.4	22.8	22.8
8	Guyana **	19.4	19.5	7.5	7.6	9.2	9.3	15.5	15.6	27.8	27.9	17.4	17.5
8	Haiti **	10.5	15.6	7.9	10.4	5.9	11.9	6.7	12.1	14.0	20.2	11.6	16.8
8	Jamaica **	19.3	19.4	7.5	7.5	9.2	9.2	15.1	15.5	27.8	27.9	17.3	17.5
8	Mexico	13.9	17.5	11.2	14.6	10.2	13.6	13.6	17.1	15.8	19.4	13.4	16.9
8	Nicaragua **	22.9	25.3	10.6	13.1	7.3	9.8	10.8	13.3	36.1	38.6	22.1	24.6
8	Paraguay	15.5	15.5	5.8	5.8	8.6	8.6	11.9	11.9	22.4	22.4	15.4	15.4
8	Peru **	54.0	71.5	38.5	55.6	29.7	46.3	42.9	60.4	69.3	87.1	48.9	66.3
8	Trinidad & To **	19.3	46.2	7.5	34.2	9.2	36.2	15.1	42.1	27.8	54.8	17.3	43.1
8	Uruguay **	28.2	29.2	20.7	21.7	20.1	21.1	23.0	24.0	35.2	36.2	27.5	28.5
8	Venezuela	17.2	18.2	10.5	11.5	7.9	8.9	12.3	13.4	23.7	24.7	16.4	17.4
9	Bahamas **	33.1	34.6	31.9	33.4	35.0	36.5	35.3	36.8	32.3	33.8	32.3	33.8
9	Cyprus **	20.3	26.3	8.6	14.6	3.1	9.1	11.7	17.7	30.9	36.9	17.5	23.5
9	Hong Kong	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Kuwait	4.7	4.7	5.2	5.2	4.1	4.1	4.1	4.1	4.8	4.8	4.2	4.2
9	Qatar **	4.0	4.0	4.1	4.1	4.0	4.0	4.1	4.1	3.9	3.9	4.2	4.2
9	Singapore	0.4	0.4	0.0	0.0	0.0	0.0	0.4	0.4	0.7	0.7	0.4	0.4
9	Taiwan, China	10.7	10.7	5.2	5.2	7.3	7.3	8.8	8.8	5.0	5.0	9.7	9.7
9	United Arab Em. **	4.9	4.9	4.4	4.4	5.0	5.0	5.0	5.0	5.5	5.5	4.5	4.5

Sources: UNCTAD, Directory of Trade Regimes, 1994 and Handbook of Trade Control Measures of Developing Countries, 1987.

Table A.5: Sectoral Averages of Non-Tariff Measures Coverage Ratio /a in 80 Developing Countries (Unweighted in %)

	80 LDCs /b	All Primary	Food	Agr Raw Matl.	Min. Ores	Min. Fuels	Non Fer Metals	All Manuf	Chem-icals	Iron & Steel	Mach & Equip.	Other Manuf	All Goods
1	Benin **	24.3	41.4	12.3	0.0	30.6	0.0	14.2	6.2	0.0	26.4	13.2	17.0
1	Burkina Faso **	48.6	32.5	69.5	23.9	97.2	73.6	93.2	94.7	100.0	96.6	90.1	80.6
1	Burundi	0.2	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.6	0.3
1	Centr Afr Rep **	9.3	12.7	1.3	0.7	41.7	0.0	3.1	2.8	0.9	0.6	4.8	5.1
1	Cote d'Ivoire **	12.5	21.1	1.0	4.5	25.0	0.0	4.4	6.7	0.8	6.1	3.0	6.6
1	Ethiopia	42.9	69.7	35.2	11.2	1.4	7.5	14.7	0.9	1.8	7.2	26.1	22.5
1	Ghana **	63.9	76.8	64.5	69.4	19.4	28.3	42.0	14.6	52.7	19.2	64.4	48.4
1	Guinea **	46.9	76.5	38.6	2.2	1.4	19.3	35.1	6.7	25.3	37.8	47.5	38.2
1	Kenya	37.0	68.3	14.7	7.5	2.8	5.2	38.3	5.4	24.4	16.1	65.8	37.8
1	Madagascar	0.8	0.0	0.0	1.5	0.0	5.9	1.6	1.4	0.0	0.9	2.1	1.7
1	Malawi	84.8	76.1	99.6	84.3	74.3	100.0	93.8	86.3	87.3	100.0	94.7	91.3
1	Mozambique **	42.2	25.9	48.2	35.1	58.3	100.0	62.7	69.1	100.0	43.7	65.1	56.9
1	Nigeria	22.7	38.9	17.5	1.5	0.0	0.0	3.1	0.5	0.0	0.0	6.2	8.8
1	Sierra Leone **	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	Somalia **	13.6	6.7	0.0	47.8	38.9	13.2	2.8	5.0	0.0	1.4	2.9	6.3
1	Sudan **	12.0	25.1	0.0	0.7	0.0	0.9	9.4	3.3	0.0	3.8	15.9	10.0
1	Tanzania	64.3	65.7	62.3	57.5	63.6	71.7	85.9	96.7	97.3	77.5	83.9	79.7
1	Uganda **	13.8	26.1	0.0	0.0	0.0	15.1	14.1	0.0	3.3	38.2	9.4	13.9
1	Zaire	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	Zambia **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	Zimbabwe	99.7	100.0	99.9	100.0	98.8	98.1	91.2	94.5	100.0	97.5	85.5	93.6
2	Angola **	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.4	0.0	0.5	1.1	0.7
2	Cameroon **	13.2	8.1	37.7	5.5	0.0	1.9	23.4	10.1	4.4	8.1	39.3	20.7
2	Congo **	2.8	5.0	0.9	2.2	0.0	0.0	4.9	4.2	1.8	2.4	6.8	4.6
2	Mauritius	30.8	42.0	12.3	16.4	12.9	50.0	36.9	17.8	53.5	46.1	38.8	35.2
2	Senegal **	8.4	13.1	2.3	3.0	16.7	1.9	6.1	8.2	10.7	3.1	6.2	7.2
3	Bangladesh **	55.2	73.9	52.3	20.3	66.7	13.6	46.8	30.7	39.3	30.7	63.0	49.4
3	China	11.5	3.4	38.4	3.2	12.3	0.2	11.3	3.1	74.6	9.9	8.1	11.3
3	India	71.7	88.4	47.6	68.3	85.3	43.7	58.9	53.3	50.6	36.3	73.8	62.6
3	Nepal	1.0	0.0	0.0	2.2	0.0	6.6	0.5	0.0	0.0	0.3	0.8	0.7
3	Pakistan	6.8	8.6	3.3	3.0	22.1	0.0	17.3	13.6	0.0	4.1	27.6	14.5
3	Sri Lanka	2.8	4.5	0.0	4.0	0.0	1.9	4.0	10.6	0.0	5.8	0.6	3.8
4	Indonesia	4.6	8.7	0.0	1.0	4.2	0.8	2.0	1.4	16.1	2.3	0.4	2.7
4	Korea	9.0	17.6	1.8	0.7	2.8	0.0	0.2	0.2	0.0	0.0	0.3	2.6
4	Malaysia	1.2	2.0	0.0	2.2	0.0	0.0	2.4	3.6	8.5	2.2	1.2	2.1
4	Papua N Guinea **	9.4	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
4	Philippines **	40.5	60.0	24.2	12.7	75.0	0.0	46.3	47.7	20.1	87.6	28.0	44.9
4	Thailand	8.8	12.7	3.8	7.8	8.3	3.6	4.2	0.9	0.6	3.6	6.3	5.5
5	Romania **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Turkey	93.9	92.2	99.3	98.5	70.6	100.0	97.3	92.3	100.0	99.1	98.3	96.4
5	Yugoslavia	36.6	39.8	39.4	21.8	25.3	42.9	25.9	10.9	81.9	21.5	28.2	29.2
6	Bahrain **	2.0	3.9	0.8	0.0	0.0	0.0	1.3	2.0	0.0	3.5	0.0	1.5
6	Iran **	99.0	97.9	100.0	100.0	100.0	100.0	99.4	97.2	100.0	100.0	100.0	99.3
6	Jordan **	37.0	77.3	0.9	4.5	0.0	0.0	3.6	9.8	0.0	2.2	2.1	12.9
6	Oman **	2.2	2.9	0.9	4.5	0.0	0.0	3.8	7.8	0.0	3.3	2.8	3.6
6	Saudi Arabia	4.4	8.9	0.8	0.0	0.0	0.0	3.4	5.6	4.0	5.0	1.4	3.9
6	Syria **	30.7	44.4	31.1	14.9	11.8	1.1	38.7	32.1	25.3	28.9	48.3	36.6
6	Yemen **	25.2	19.8	38.9	2.6	97.2	0.0	30.2	0.9	0.0	45.2	39.4	28.7
7	Algeria	26.8	57.2	0.0	0.0	0.0	0.0	2.8	1.2	0.0	0.2	5.2	9.5
7	Egypt	43.8	70.1	10.5	10.4	78.6	16.4	45.6	55.9	17.3	29.5	52.5	45.2
7	Libya **	15.0	29.2	4.8	2.2	0.0	0.0	8.4	1.6	1.3	6.7	13.2	10.3
7	Morocco **	43.0	73.9	13.6	4.5	65.0	0.9	21.8	13.0	3.1	11.8	33.0	27.6
7	Tunisia	37.3	62.3	9.4	17.1	26.7	17.4	30.5	14.5	8.5	18.8	46.1	32.7
8	Argentina	0.1	0.0	0.5	0.0	0.0	0.0	0.3	0.1	0.0	1.0	0.0	0.2
8	Bolivia	1.6	3.4	0.0	0.0	0.0	0.0	1.8	2.9	0.0	3.4	0.7	2.0
8	Brazil	4.1	0.5	0.5	1.6	47.3	1.9	0.4	2.1	0.0	0.0	0.0	1.5
8	Chile	0.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
8	Colombia	1.0	1.2	1.9	0.0	0.0	0.0	1.6	5.5	0.0	0.3	0.7	1.7
8	Costa Rica **	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	4.1	0.0	0.8
8	Ecuador	67.5	91.4	54.1	19.2	84.6	38.7	61.8	42.1	27.1	39.9	85.7	63.6
8	El Salvador **	17.7	33.9	0.9	3.0	0.0	11.3	19.7	0.7	0.8	10.3	35.1	19.2
8	Guatemala **	12.5	20.6	9.2	6.0	0.0	0.0	5.0	13.3	0.0	4.2	2.2	7.4
8	Guyana **	18.0	37.6	0.0	3.0	0.0	0.0	15.3	53.2	18.7	1.8	4.9	16.0
8	Haiti **	34.5	51.3	39.5	0.7	16.7	2.8	29.7	8.9	6.7	24.7	44.1	30.8
8	Jamaica **	10.3	20.3	1.9	3.0	0.0	0.0	4.8	13.4	0.0	5.6	1.1	6.6

8	Mexico	8.5	12.9	6.1	0.0	15.8	0.0	1.8	1.1	13.1	1.4	1.0	3.9
8	Nicaragua **	25.6	52.2	3.5	0.7	1.4	1.9	28.5	7.0	2.0	16.1	47.5	27.8
8	Paraguay	6.4	12.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.8
8	Peru **	73.0	99.9	67.4	20.9	38.9	52.8	45.8	24.9	100.0	14.4	64.6	53.4
8	Trinidad & Tob. *	30.8	61.6	0.0	2.1	20.8	2.2	20.5	5.9	10.0	13.4	31.9	23.4
8	Uruguay **	10.0	3.8	3.9	5.0	94.4	0.2	15.5	16.7	2.2	3.5	22.7	14.1
8	Venezuela	3.0	3.6	1.0	1.5	9.7	1.9	1.7	6.1	0.0	0.3	0.7	2.4
9	Bahamas **	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1
9	Cyprus **	40.8	68.4	15.8	9.0	48.1	5.7	28.6	30.3	23.3	47.0	19.3	32.2
9	Hong Kong	0.8	1.7	0.0	0.0	0.0	0.0	0.3	1.4	0.5	0.0	0.0	0.5
9	Kuwait	6.8	10.2	0.0	5.2	0.0	13.2	1.8	2.2	1.3	1.1	2.1	3.5
9	Qatar **	2.4	5.0	0.0	0.0	0.0	0.0	0.6	1.4	0.0	0.0	0.6	1.3
9	Singapore	1.2	1.7	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
9	Taiwan, China	58.0	94.2	38.9	18.7	100.0	18.5	28.8	35.8	22.4	27.2	30.2	35.9
9	United Arab Em. *	2.9	5.3	0.0	3.0	0.0	0.0	0.3	1.4	0.0	0.0	0.0	1.0

Notes: /a Include additional quantitative restrictions in the form of all types of licences and import authorizati quotas, import prohibitions, advance import deposits, foreign exchange restrictions, fixed customs valua and state trading monopolies. It is calculated as % of products within a category that is affected by a applied to a tariff line.

/b Countries with ** are the late 1980s data, where country classifications are as: 1 = Low income Africa, 2 = Middle income Africa, 3 = Low income Asia, 4 = Middle income Asia, 5 = Other Europe, 6 = Middle East, 7 = North Africa, 8 = Latin America, 9 = High income Non-OECDs.

Sources: UNCTAD, Directory of Trade Regimes, 1994 and Handbook of Trade Control Measures of Developing Countries, 1987.

Table A.6: Sectoral Averages of Quantitative Restriction Coverage Ratio /a in 80 Developing Countries (Unweighted in %)

	80 LDCs /b	All Primary	Food	Agr Raw Matl.	Min. Ores	Min. Fuels	Non Fer Metals	All Manuf	Chem-icals	Iron & Steel	Mach & Equip.	Other Manuf.	All Goods
1	Benin **	15.1	21.9	11.8	0.0	30.6	0.0	6.4	4.8	0.0	0.0	12.1	9.1
1	Burkina Faso **	46.8	28.7	69.3	23.9	97.2	73.6	93.2	94.7	100.0	96.6	90.1	80.1
1	Burundi	0.2	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.6	0.3
1	Centr Afr Rep **	6.4	13.0	0.8	0.7	0.0	0.0	1.8	2.5	0.9	0.6	2.1	3.4
1	Cote d'Ivoire **	11.5	19.4	0.1	4.5	25.0	0.0	4.3	6.6	0.7	6.1	2.7	6.2
1	Ethiopia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
1	Ghana **	61.3	74.6	60.5	63.4	19.4	28.3	38.1	8.2	49.3	18.0	60.3	44.9
1	Guinea **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	Kenya	34.5	62.8	14.7	7.5	2.8	5.2	38.3	5.4	24.4	16.1	65.8	37.1
1	Madagascar	0.8	0.0	0.0	1.5	0.0	5.9	1.6	1.4	0.0	0.9	2.1	1.7
1	Malawi	84.8	76.1	99.6	84.3	74.3	100.0	93.8	86.3	87.3	100.0	94.7	91.3
1	Mozambique **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	Nigeria	22.7	38.9	17.5	1.5	0.0	0.0	3.1	0.5	0.0	0.0	6.2	8.8
1	Sierra Leone **	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	Somalia **	13.6	6.7	0.0	47.8	38.9	13.2	2.9	5.3	0.0	1.4	2.9	6.3
1	Sudan **	12.0	25.1	0.0	0.7	0.0	0.9	9.4	3.3	0.0	3.8	15.9	10.0
1	Tanzania	19.7	12.3	36.4	18.7	1.4	30.2	30.7	32.3	13.4	10.3	42.4	27.5
1	Uganda **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	Zaire	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	Zambia **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1	Zimbabwe	99.7	100.0	99.9	100.0	98.8	98.1	91.2	94.5	100.0	97.5	85.5	93.6
2	Angola **	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.4	0.0	0.5	1.1	0.7
2	Cameroon **	13.7	9.1	37.7	5.5	0.0	1.9	21.8	10.3	4.4	7.8	36.0	19.5
2	Congo **	1.7	3.3	0.0	0.7	0.0	0.0	3.1	4.0	1.8	2.2	3.4	3.1
2	Mauritius	30.8	42.0	12.3	16.4	12.9	50.0	36.9	17.8	53.5	46.1	38.8	35.2
2	Senegal **	5.7	10.1	0.0	3.0	4.6	1.9	5.1	8.3	10.7	3.0	4.0	5.7
3	Bangladesh **	53.3	73.6	51.5	20.3	44.0	13.6	46.8	30.7	39.3	30.7	62.5	48.6
3	China	11.5	3.4	38.4	3.2	12.3	0.2	11.3	3.1	74.6	9.9	8.1	11.3
3	India	65.0	82.3	44.5	59.0	66.8	38.3	56.2	51.2	14.0	36.3	73.5	58.8
3	Nepal	1.0	0.0	0.0	2.2	0.0	6.6	0.5	0.0	0.0	0.3	0.8	0.7
3	Pakistan	6.8	8.6	3.3	3.0	22.1	0.0	17.3	13.6	0.0	4.1	27.6	14.5
3	Sri Lanka	2.8	4.5	0.0	4.0	0.0	1.9	4.0	10.6	0.0	5.8	0.6	3.8
4	Indonesia	2.2	4.2	0.0	1.0	0.0	0.8	1.8	1.2	14.3	2.3	0.4	1.9
4	Korea	9.0	17.6	1.8	0.7	2.8	0.0	0.2	0.1	0.0	0.0	0.3	2.6
4	Malaysia	1.2	2.0	0.0	2.2	0.0	0.0	2.4	3.6	8.5	2.2	1.2	2.1
4	Papua N Guinea **	9.4	19.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
4	Philippines **	38.2	56.5	21.1	12.7	75.0	0.0	43.7	49.0	20.1	87.5	22.3	42.4
4	Thailand	8.8	12.7	3.8	7.8	8.3	3.6	4.2	0.9	0.6	3.6	6.3	5.5
5	Romania **	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	Turkey	2.0	0.0	0.9	9.7	0.0	4.7	3.0	1.8	16.0	5.9	0.5	2.7
5	Yugoslavia	36.6	39.8	39.4	21.8	25.3	42.9	25.9	10.9	81.9	21.5	28.2	29.2
6	Bahrain **	2.0	3.9	0.8	0.0	0.0	0.0	1.3	2.0	0.0	3.4	0.0	1.5
6	Iran **	98.8	97.9	99.9	100.0	97.2	100.0	94.5	75.6	100.0	100.0	99.5	95.4
6	Jordan **	39.2	82.0	0.9	4.5	0.0	0.0	3.6	9.8	0.0	2.3	2.1	11.7
6	Oman **	2.2	2.9	0.9	4.5	0.0	0.0	3.8	7.8	0.0	3.3	2.7	3.6
6	Saudi Arabia	4.4	8.9	0.8	0.0	0.0	0.0	3.1	5.6	0.0	5.0	1.4	3.5
6	Syria **	25.2	40.8	16.1	11.9	11.8	0.5	31.7	20.5	0.0	28.9	41.8	30.0
6	Yemen **	18.2	19.8	38.9	1.1	0.0	0.0	30.3	0.9	0.0	45.4	39.4	26.8
7	Algeria	26.8	57.2	0.0	0.0	0.0	0.0	2.8	1.2	0.0	0.2	5.2	9.5
7	Egypt	31.0	53.8	9.6	7.5	12.9	16.4	43.7	48.9	17.3	29.5	51.7	40.3
7	Libya **	15.0	29.2	4.8	2.2	0.0	0.0	8.4	1.6	1.3	6.7	13.2	10.3
7	Morocco **	40.2	69.2	13.6	0.0	65.0	0.9	20.9	8.7	3.1	11.8	33.0	26.2
7	Tunisia	32.7	52.5	9.4	17.1	26.7	17.4	29.7	11.1	8.5	18.8	46.1	31.0
8	Argentina	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.1	0.0	1.0	0.0	0.2
8	Bolivia	1.6	3.4	0.0	0.0	0.0	0.0	1.8	2.9	0.0	3.4	0.7	2.0
8	Brazil	4.1	0.5	0.5	1.6	47.3	1.9	0.4	2.1	0.0	0.0	0.0	1.5
8	Chile	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Colombia	1.0	1.2	1.9	0.0	0.0	0.0	1.6	5.5	0.0	0.3	0.7	1.7
8	Costa Rica **	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	4.1	0.0	0.8
8	Ecuador	30.2	43.0	31.2	7.3	19.6	6.6	25.7	19.8	14.2	11.1	36.9	27.0
8	El Salvador **	17.7	33.9	0.9	3.0	0.0	11.3	19.7	0.7	0.8	10.3	35.1	19.2
8	Guatemala **	12.5	20.6	9.2	6.0	0.0	0.0	4.2	13.3	0.0	3.3	1.2	6.6
8	Guyana **	13.0	27.7	0.0	0.0	0.0	0.0	1.4	0.4	0.0	0.2	2.7	4.6
8	Haiti **	19.9	38.3	1.8	0.7	16.7	2.8	11.1	7.3	6.7	0.5	18.8	13.5
8	Jamaica **	10.3	22.5	1.9	3.0	0.0	0.0	4.6	10.3	0.0	3.3	1.2	6.0

8	Mexico	6.1	10.4	1.1	0.0	14.7	0.0	0.7	0.3	0.0	1.4	0.5	2.4
8	Nicaragua **	25.6	52.2	3.5	0.7	1.4	1.9	28.5	7.0	2.0	16.1	47.5	27.8
8	Paraguay	6.4	12.5	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.8
8	Peru **	72.9	99.9	67.4	20.9	38.9	52.8	45.8	24.9	100.0	14.4	64.4	53.1
8	Trinidad & Tob. **	29.4	58.5	0.0	2.1	20.8	2.2	16.5	5.1	10.0	6.3	27.6	20.1
8	Uruguay **	1.0	0.8	0.3	0.0	0.0	0.0	1.0	1.1	0.0	2.5	0.3	1.1
8	Venezuela	1.0	0.9	1.0	1.5	0.0	1.9	1.4	4.6	0.0	0.3	0.7	1.6
9	Bahamas **	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1
9	Cyprus **	40.8	68.4	15.8	9.0	48.1	5.7	28.6	30.3	23.3	47.0	19.3	32.2
9	Hong Kong	0.8	1.7	0.0	0.0	0.0	0.0	0.3	1.4	0.5	0.0	0.0	0.5
9	Kuwait	6.4	9.3	0.0	5.2	0.0	13.2	1.8	2.2	1.3	1.1	1.9	3.3
9	Qatar **	2.4	5.1	0.0	0.0	0.0	0.0	0.5	1.4	0.0	0.0	0.6	1.2
9	Singapore	1.2	1.7	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
9	Taiwan, China	58.0	94.2	38.9	18.7	100.0	18.5	28.8	35.8	22.4	27.2	30.2	35.9
9	United Arab Em. **	2.9	5.3	0.0	3.0	0.0	0.0	0.3	1.4	0.0	0.0	0.0	1.0

Notes: /a Include quantitative restrictions in the form of all types of licences and import authorization, quotas, and import prohibitions. It is calculated as % of products within a category that is affected by a QR applied to a tariff line.

/b Countries with ** are the late 1980s data, where country classifications are as: 1 = Low income Africa, 2 = Middle income Africa, 3 = Low income Asia, 4 = Middle income Asia, 5 = Other Europe, 6 = Middle East, 7 = North Africa, 8 = Latin America, 9 = High income Non-OECDs.

Sources: UNCTAD, Directory of Trade Regimes, 1994 and Handbook of Trade Control Measures of Developing Countries, 1987.

Table A.7: Pre- and Post Uruguay Round Import Coverage Ratio of Non-Tariff Measures in OECD Market

	80 LDCs	1992 OECD Imports ($ mill)	Pre-UR Coverage Ratio (%)	Post-UR Coverage Ratio (%)	Percent Change	Level Change
1	Benin	76	1.3	0.3	-76.9	-1.0
1	Burkina Faso	53	12.3	0.0	-100.0	-12.3
1	Burundi	74	0.1	0.0	-100.0	-0.1
1	Central African Rep	102	0.1	0.1	0.0	0.0
1	Cote d'Ivoire	2258	14.1	1.5	-89.4	-12.6
1	Ethiopia	160	1.8	1.2	-33.3	-0.6
1	Ghana	886	0.4	0.2	-50.0	-0.2
1	Guinea	526	0.3	0.1	-66.7	-0.2
1	Kenya	837	3.5	0.3	-91.4	-3.2
1	Madagascar	340	7.6	2.9	-61.8	-4.7
1	Malawi	393	29.6	3.7	-87.5	-25.9
1	Mozambique	147	10.3	0.6	-94.2	-9.7
1	Nigeria	11379	14.4	14.4	0.0	0.0
1	Sierra Leone	354	0.1	0.0	-100.0	-0.1
1	Somalia	19	9.0	0.0	-100.0	-9.0
1	Sudan	149	12.4	4.1	-66.9	-8.3
1	Tanzania	266	3.8	0.5	-86.8	-3.3
1	Uganda	162	0.0	0.0	0.0	0.0
1	Zaire	1277	0.0	0.0	0.0	0.0
1	Zambia	630	0.7	0.0	-100.0	-0.7
1	Zimbabwe	875	20.3	6.9	-66.0	-13.4
2	Angola	3684	4.7	4.7	0.0	0.0
2	Cameroon	1577	20.8	19.7	-5.3	-1.1
2	Congo	1440	38.5	38.0	-1.3	-0.5
2	Mauritius	1279	61.6	2.2	-96.4	-59.4
2	Senegal	362	19.1	0.0	-100.0	-19.1
3	Bangladesh	2060	58.3	10.5	-82.0	-47.8
3	China	70347	18.2	3.3	-81.9	-14.9
3	India	13532	29.4	5.1	-82.7	-24.3
3	Nepal					
3	Pakistan	3979	50.4	6.9	-86.3	-43.5
3	Sri Lanka	2067	50.5	0.9	-98.2	-49.6
4	Indonesia	22741	10.1	2.6	-74.3	-7.5
4	Korea	42981	24.0	10.9	-54.6	-13.1
4	Malaysia	23862	6.5	0.7	-89.2	-5.8
4	Papua N Guinea					
4	Philippines	9496	20.4	1.2	-94.1	-19.2
4	Thailand	22544	25.3	2.2	-91.3	-23.1
5	Czechoslovakia	4420	19.2	2.5	-87.0	-16.7
5	Hungary	4302	24.8	6.7	-73.0	-18.1
5	Poland	5870	17.1	6.0	-64.9	-11.1
5	Romania	1388	27.1	10.9	-59.8	-16.2
5	Turkey	6286	36.8	3.9	-89.4	-32.9
5	Yogoslavia	9611	19.7	5.5	-72.1	-14.2
6	Bahrain					
6	Iran	9822	10.1	9.9	-2.0	-0.2
6	Jordan	148	2.3	1.1	-52.2	-1.2
6	Oman					
6	Saudi Arabia					
6	Syria	1328	20.3	20.2	-0.5	-0.1
6	Yemen	817	2.1	2.1	0.0	0.0
7	Algeria	9428	25.5	25.4	-0.4	-0.1
7	Egypt	3853	23.2	9.3	-59.9	-13.9
7	Libya					

7	Morocco	4778	30.2	3.0	-90.1	-27.2
7	Tunisia	3377	25.7	4.6	-82.1	-21.1
8	Argentina	6606	15.5	1.2	-92.3	-14.3
8	Bolivia	271	0.7	0.3	-57.1	-0.4
8	Brazil	24369	10.6	2.1	-80.2	-8.5
8	Chile	7017	6.5	0.2	-96.9	-6.3
8	Colombia	5724	6.6	2.5	-62.1	-4.1
8	Costa Rica	2349	15.7	0.9	-94.3	-14.8
8	Ecuador	2537	5.7	1.5	-73.7	-4.2
8	El Salvador	535	4.5	1.3	-71.1	-3.2
8	Guatemala	1525	12.5	1.6	-87.2	-10.9
8	Guyana	325	41.6	3.9	-90.6	-37.7
8	Haiti	145	13.0	0.0	-100.0	-13.0
8	Jamaica	1287	35.2	2.7	-92.3	-32.5
8	Mexico	43301	7.9	4.8	-39.2	-3.1
8	Nicaragua	229	10.1	1.3	-87.1	-8.8
8	Paraguay	306	0.9	0.3	-66.7	-0.6
8	Peru	2161	5.7	0.0	-100.0	-5.7
8	Trinidad & Tobago	1219	7.6	1.3	-82.9	-6.3
8	Uruguay	790	33.7	0.7	-97.9	-33.0
8	Venezuela	11318	9.2	8.3	-9.8	-0.9
9	Bahamas	1038	1.9	1.9	0.0	0.0
9	Cyprus	480	18.7	2.9	-84.5	-15.8
9	Hong Kong	26368	34.3	1.8	-94.8	-32.5
9	Kuwait					
9	Qatar					
9	Singapore	22686	7.1	1.3	-81.7	-5.8
9	Taiwan, China	55335	12.0	3.1	-74.2	-8.9
9	United Arab Em.					

Notes: /a Non-tariff measures include tariff quotas, increased duties, safeguard duties, retaliatory duties and customs surcharges, variable levies and flexible import fees, non-automatic licensing and discretionary licensing, quotas and prohibitions, voluntary export restraints, MFA quotas and textile restraint arrangemnts, orderly marketing arrangements, other quantitative restrictions, other restrictions imposed under the MFA minimum, reference or other import price controls, voluntary export price restraints, state monopoly of imports, and local content regulations.

/b Calculations of non-tariff measures are based on all goods imported in OECD markets.

Sources: World Bank-UNCTAD, SMART data base; Low and Yeats, "Non-tariff Measures and Developing Countries", World Bank Policy Research Working Paper #1353, 1994; and Amjadi and Yeats, "Non-tariff Barriers Africa Faces", World Bank Policy Research Working Paper #1439, 1995.

Table A.8: Average Tariffs, Non-Tariff Measures and Economic Growth for 80 Developing Countries (%)

	80 LDCs /g	Recent Tariffs /a	Total Charges /b	All NTMs /c	GDP Growth /d	Export Growth /e	Import Growth /e	Open-ness /f
1	Benin	41.6	49.4	17.0	2.7	4.8	-4.8	37.0
1	Burkina Faso **	60.8	76.8	80.6	3.7	4.1	3.4	17.2
1	Burundi	36.9	37.9	0.3	3.6	5.6	-0.4	21.6
1	Centr Afr Rep **	32.0	39.3	5.1	1.0	-1.1	2.1	23.0
1	Cote d'Ivoire	22.0	25.3	6.6	0.1	2.7	-4.2	49.0
1	Ethiopia	29.6	31.2	22.5	1.8	-2.2	-1.3	17.1
1	Ghana	17.0	33.0	48.4	3.5	5.3	2.7	34.6
1	Guinea	10.8	10.8	38.2	3.7	-4.5	-3.2	39.9
1	Kenya	22.0	44.7	37.8	3.8	3.3	-0.8	36.0
1	Madagascar	6.1	40.1	1.7	0.9	0.4	-3.3	24.6
1	Malawi	16.3	16.3	91.3	3.0	2.1	4.0	35.2
1	Mozambique **	15.6	25.6	56.9	1.0	-6.9	0.0	50.7
1	Nigeria	32.8	39.8	8.8	2.7	-0.6	-11.2	39.9
1	Sierra Leone	41.0	41.0	100.0	1.1	-0.1	-7.4	38.0
1	Somalia	23.2	31.0	6.3	2.4	-7.8	-4.5	46.8
1	Sudan	43.0	56.6	10.0	1.9	-3.8	-4.5	18.2
1	Tanzania	27.5	27.5	79.7	3.6	-0.4	-1.1	26.1
1	Uganda	17.1	17.1	13.9	3.8	-1.4	-2.3	18.7
1	Zaire	24.7	24.7	100.0	1.9	1.6	3.3	29.5
1	Zambia	13.6	13.6	0.0	0.9	-2.6	-3.2	52.9
1	Zimbabwe	17.2	30.1	93.6	2.7	-1.1	0.2	28.3
2	Angola **	11.6	20.6	0.7	0.3	11.5	1.1	47.0
2	Cameroon	18.8	42.2	20.7	0.0	6.8	-2.5	32.4
2	Congo **	32.0	33.2	4.6	2.7	3.0	-4.4	75.4
2	Mauritius	29.0	60.3	35.2	6.0	7.6	10.3	80.5
2	Senegal	12.6	12.6	7.2	2.8	2.9	1.8	36.1
3	Bangladesh	50.0	83.2	49.4	4.2	9.8	4.8	18.4
3	China	35.6	35.6	11.3	9.6	11.5	9.7	29.6
3	India	47.8	95.2	62.6	5.2	7.0	4.2	12.1
3	Nepal	16.1	16.1	0.7	5.0	9.7	4.4	21.2
3	Pakistan	50.0	73.3	14.5	6.0	10.1	3.0	30.1
3	Sri Lanka	26.0	29.2	3.8	4.0	7.3	4.0	55.9
4	Indonesia	17.0	20.1	2.7	5.8	6.7	4.5	39.9
4	Korea	7.9	12.3	2.6	9.1	12.3	11.4	56.4
4	Malaysia	13.0	17.6	2.1	6.2	12.6	9.7	115.5
4	Papua N Guinea **	7.0	14.2	2.6	3.1	6.0	1.2	69.8
4	Philippines	21.7	33.1	44.9	1.4	3.4	4.5	42.8
4	Thailand	23.1	37.8	5.5	8.2	15.5	13.8	57.3
5	Romania	12.3	12.3	0.0	-2.5	-10.8	-3.0	25.3
5	Turkey	9.0	24.7	96.4	4.6	9.1	11.0	25.9
5	Yugoslavia	11.8	12.0	29.2	0.3	4.0	1.2	39.1
6	Bahrain	3.0	3.0	1.5	2.2	3.9	0.5	123.9
6	Iran **	20.7	100.9	99.3	2.6	4.2	1.2	19.1
6	Jordan	20.5	28.0	12.9	1.2	5.8	-2.4	68.2
6	Oman	2.5	2.5	3.6	7.6	8.4	1.2	60.7
6	Saudi Arabia	12.1	12.1	3.9	0.4	-4.2	-5.5	74.0
6	Syria	11.0	27.5	36.6	1.8	8.3	-5.6	31.6
6	Yemen **	16.2	22.0	28.7	3.4	1.2	-5.3	32.8
7	Algeria	22.9	24.9	9.5	2.1	3.0	-5.1	38.2
7	Egypt	42.2	42.2	45.2	4.3	0.8	-1.5	34.7
7	Libya	27.0	34.7	10.3	-5.7	-9.3	-7.2	65.0
7	Morocco	20.2	36.1	27.6	3.7	3.9	4.0	40.2

7	Tunisia	33.2	30.6	32.7	3.7	7.2	3.0	64.6
8	Argentina	15.8	19.4	0.2	0.8	3.2	-2.1	13.1
8	Bolivia	9.8	9.8	2.0	1.1	1.7	-0.1	38.4
8	Brazil	10.7	15.4	1.5	2.1	5.2	-0.8	15.2
8	Chile	11.0	19.9	0.1	5.1	6.6	4.3	41.1
8	Colombia	11.5	11.8	1.7	3.7	11.0	-0.9	25.8
8	Costa Rica	11.7	61.7	0.8	3.6	5.6	4.9	62.1
8	Ecuador	11.9	11.9	63.6	2.4	3.4	-2.2	38.4
8	El Salvador	9.2	9.2	19.2	1.6	-2.8	2.0	38.2
8	Guatemala	16.0	22.8	7.4	1.7	-0.1	1.4	31.7
8	Guyana	20.0	20.0	16.0	-1.3	0.2	-1.4	124.1
8	Haiti **	11.6	16.8	30.8	-0.9	-0.7	-1.5	47.6
8	Jamaica	19.3	19.3	6.6	2.3	2.1	2.6	75.5
8	Mexico	13.5	16.9	3.9	1.6	5.4	6.7	24.3
8	Nicaragua	17.4	24.6	27.8	-1.8	-4.7	-3.3	48.6
8	Paraguay	8.0	8.0	1.8	2.8	8.6	7.5	27.3
8	Peru	16.3	66.3	53.4	-0.5	-0.3	-1.6	20.8
8	Trinidad & To	17.0	43.1	23.4	-3.6	-2.1	-8.0	70.1
8	Uruguay	14.7	28.5	14.1	1.3	2.6	1.2	30.9
8	Venezuela	11.8	17.4	2.4	2.1	1.7	-3.6	38.8
9	Bahamas **	32.3	33.8	0.1	4.1	9.6	9.8	206.0
9	Cyprus	10.1	23.5	32.2	6.1	4.7	7.0	60.4
9	Hong Kong	0.0	0.0	0.5	6.5	15.8	11.9	144.4
9	Kuwait	4.2	4.2	3.5	1.3	-6.0	-4.4	65.2
9	Qatar	5.0	5.0	1.3	-1.0	1.5	-1.1	75.2
9	Singapore	0.4	0.4	0.3	6.9	12.7	9.7	298.7
9	Taiwan, China	11.2	11.2	35.9	8.4	10.0	13.2	79.2
9	United Arab Em. *	4.5	4.5	1.0	0.3	6.0	1.9	87.8

Notes: /a Based on unweighted averages of most recent available tariffs in many countries.
/b Include unweighted averages of tariffs and para tariffs for all goods.
/c Unwighted averages of non-tariff measures for all goods.
/d Least square growth rate of real GDP from 1980-93.
/e Least square growth rate of merchandise goods exports and imports in constant prices from 1980-93.
/f Average total trade (exports + imports) as % of GDP from 1980-93.
/g Countries with ** are the late 1980s tariffs, total import charges, and all NTMs, where country classifications are the same as Table A.1.

Sources: UNCTAD, Directory of Trade Regimes, 1994 and Handbook of Trade Control Measures of Developing Countries, 1987; GATT/WTO, Trade Policy Review, various issues, 1990-95; UN COMTRADE data base; and World Bank, World Development Report, 1995.

Table A.9: Average Tariffs and NTMs For Industrialized Countries (%)

Country	Unwgt Tariff 1989	Unwgt Tariff 1993	Imp Wgt Tariff 1989	Imp Wgt Tariff 1993	Unwgt NTMs 1989	Unwgt NTMs 1993	Unwgt QRs 1989	Unwgt QRs 1993
Australia	14.2	8.2	13.7	6.4	3.4	0.7	0.5	0.0
Austria	11.0	9.5	10.6	8.5	65.8	55.6	13.4	11.9
Canada	9.1	8.8	6.9	6.7	11.1	11.0	6.6	6.8
European Union	7.4	7.6	6.0	6.2	26.6	23.7	19.5	17.2
Finland	7.7	7.4	5.6	5.2	10.6	8.4	9.0	7.8
IceLand	3.8	3.7	4.4	4.3		3.9		2.8
Japan	6.9	7.0	3.8	3.6	13.1	12.2	11.7	10.5
New Zealand	14.5	8.5	14.8	8.0	14.1	0.4	13.9	0.0
Norway	5.7	5.6	4.4	4.3	26.6	23.7	19.5	17.2
Sweden	4.7	4.5	3.5	3.4	32.6	29.8	15.2	1.2
Switzerland	4.4	4.2	4.3	4.5	12.9	13.5	1.7	1.8
United States	6.2	6.4	4.0	4.0	25.5	22.9	20.4	18.1
21 INDs Average	8.0	6.8	6.8	5.4	22.0	17.2	11.9	7.9
Standard Deviation	3.4	1.8	3.8	1.6	16.2	14.8	6.6	6.7

Source: OECD, Indicators of Tariff and NTB, 1996.

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